lenovo

Lenovo G40-30/G40-45/ G40-70/G40-70m/ Z40-70/Z40-75

Hardware Maintenance Manual

Notes:

- Before using this information and the product it supports, be sure to read the general information under “Notices” on page 86.
- This manual applies to the following models: Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75. The illustrations used in this manual are for Lenovo G40-70 unless otherwise stated.

First Edition (Apr. 2014)

© Copyright Lenovo 2014. All rights reserved.

LIMITED AND RESTRICTED RIGHTS NOTICE: If data or software is delivered pursuant a General Services Administration “GSA” contract, use, reproduction, or disclosure is subject to restrictions set forth in Contract No. GS-35F-05925.

© 2014 Lenovo

Contents

About this manual iv

Safety information 1
General safety 2
Electrical safety 3
Safety inspection guide 5
Handling devices that are sensitive to electrostatic discharge 6
Grounding requirements 6
Safety notices: multilingual translations 7
Laser compliance statement 14

Important service information 16
Strategy for replacing FRUs 16
  Strategy for replacing a hard disk drive 17
  Important notice for replacing a system board 17
Important information about replacing RoHS compliant FRUs 18

General checkout 19
What to do first 20
Power system checkout 21
  Checking the AC adapter 21
  Checking operational charging 21
  Checking the battery pack 22

Related service information 23
Restoring the factory contents by using OneKey Recovery 23
  Restore of factory default 23
Passwords 24
  Power-on password 24
  Hard-disk password 24
  Administrator password 24
Power management 25
  Screen blank state 25
  Putting the computer to sleep or shutting it down 25
  Putting your computer to sleep 25
  Shutting down the computer 25

Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75 26
Specifications 26
Status indicators 29
Hotkeys 30
FRU replacement notices 31
  Screw notices 31
Removing and replacing an FRU 32
  1010 Battery pack 33
  1020 Base cover 34
  1030 Optical drive 36
  1040 Hard disk drive 37
  1050 PCI Express Mini Card for wireless LAN 39
  1060 DIMM 41
  1070 Fan assembly 42
  1080 Keyboard 44
  1090 Keyboard bezel 47
  1100 USB&audio board 50
  1110 System board 52
  1120 Heat sink assembly 55
  1130 Speakers and DC-in cable 56
  1140 LCD unit 58
  1150 LCD front bezel, LCD panel, and hinges 60
  1160 Camera 63
  1170 LCD cable and antenna assembly 65
Locations 66
  Front view and right-side view 66
  Bottom and Left-side view 67
Parts list 68
  Overall 69
  LCD FRUs 77
  Keyboard 79
  Miscellaneous parts 81
  AC adapters 82
  Screw 82
  Power cords 83

Notices 86
Trademarks 87

About this manual

This manual contains service and reference information for the following Lenovo product:

Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75

Use this manual to troubleshoot problems.

The manual is divided into the following sections:

- The common sections provide general information, guidelines, and safety information required for servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important:

This manual is intended only for trained servicers who are familiar with Lenovo products. Use this manual to troubleshoot problems effectively.

Before servicing a Lenovo product, make sure to read all the information under “Safety information” on page 1 and “Important service information” on page 16.

Safety information

This chapter presents the following safety information that you need to get familiar with before you service a Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75 computer:

- “General safety” on page 2
- “Electrical safety” on page 3
- “Safety inspection guide” on page 5
- “Handling devices that are sensitive to electrostatic discharge” on page 6
- “Grounding requirements” on page 6
- “Safety notices: multilingual translations” on page 7
- “Laser compliance statement” on page 14

General safety

Follow these rules below to ensure general safety:

- Observe a good housekeeping in the area where the machines are put during and after the maintenance.
- When lifting any heavy object:
  1. Make sure that you can stand safely without slipping.
  2. Distribute the weight of the object equally between your feet.
  3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift it.
  4. Lift it by standing or pushing up with your leg muscles; this action could avoid the strain from the muscles in your back. Do not attempt to lift any object that weighs more than 16 kg (35 lb) or that you think is too heavy for you.
- Do not perform any action that causes hazards to the customer, or that makes the machine unsafe.
- Before you start the machine, make sure that other service representatives and the customer are not in a hazardous position.
- Please remove covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip over it.
- Do not wear loose clothing that can be trapped in the moving parts of the machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with the nonconductive clip, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

  Attention: Metal objects are good electrical conductors.
- Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that may be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.
- Fan louvers on the machine help to prevent the overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

Observe the following rules when working on electrical equipments.

Important:

Use only approved tools and test equipments. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.

Many customers have rubber floor mats near their machines that contain small conductive fibers to decrease electrostatic discharges. Do not use such kind of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near the equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine, and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.

    Attention: Another person must be there to switch off the power, if necessary.
  - Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.

    Attention: An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from passing through your body.
  - When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

Observe the special safety precautions when you work with very high voltages; instructions for these precautions are in the safety sections of maintenance information. Be extremely careful when you measure the high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- Never assume that power has been disconnected from a circuit. First, check it to make sure that it has been powered off.

- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts with the power on when they are removed from their normal operating places in a machine:
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators

  and similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
  - Caution: do not become a victim yourself.
  - Switch off the power.
  - Send the victim to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potential unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards according to the attachment of non-Lenovo features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
- Explosive hazards, such as a damaged CRT face or a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potential unsafe conditions, use the following checklist at the beginning of every service task. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Turn off the computer. Disconnect the power cord.
3. Check the power cord for:
    a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
    b. The power cord should be the type specified in the parts list.
    c. Insulation must not be frayed or worn.
4. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-Lenovo alterations. Use good judgment as to the safety of any non-Lenovo alterations.
7. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
8. Check for worn, frayed, or pinched cables.
9. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Notes:

1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Note:

The use of a grounding system to guard against ESD damage is desirable but not necessary.

- – Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- – When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. You can use coax or connector-outside shells on these systems.
- – Use the round ground prong of the ac plug on ac-operated computers.

Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l’ordinateur sous tension après remplacement d’une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l’unité et assurez-vous qu’aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא זאת, יש לטלטל את המחשב ולהקשיב לגילוי קולות שקשוק. חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l’elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altri parti di piccole dimensioni siano nella corretta posizione e non siano sparse all’interno dell’elaboratore. Verificare ciò scuotendo l’elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

FRU の交換後、コンピュータの電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、またコンピュータの内部で緩んでいないことを確認してください。
これを確認するには、コンピュータを振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2

⚠ DANGER

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l’eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l’horloge temps réel, veillez à n’utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d’exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts-oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמות קטנה של ניקל וקדמיום. אין לפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לסלק את הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell’acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell’RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell’appropriato Catalogo parti. L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3

⚠ DANGER

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l’exposez ni au feu ni à l’eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n’utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d’exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארז הסוללה מכיל כמות קטנה של ניקל וקדמיום. אין לפרק את מארז הסוללה, להשליך אותו לאש או למים או לקצר אותו. יש לסלק את מארז הסוללה הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה בזמן החלפת מארז הסוללה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell’acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell’appropriato Catalogo parti. L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4

⚠ DANGER

The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d’incendie, d’explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l’exposez pas à une temperature supérieure à 100°C, ne la faites pas brûler et n’en exposez pas le contenu à l’eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d’exploser.

Die Systembatterie ist eine Lithiumbatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לסלק את המחבר המקוטב שלה, לפרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לסלק את הסוללה כנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto e una batteria al litio e puo incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

**リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクターの取り外し、バッテリー本体の分解、
100 ℃ (212 ˚F) 以上への加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。**

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water at least for 15 minutes. Seek medical care if any symptoms caused by the fluid are present after washing.

Si le panneau d’affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הגביש הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניכם או ידיכם, שטפו את האזורים הנגועים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l’LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

LCDが破損し、 LCDの中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも15分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún síntoma del fluido despues de lavarse.

Safety notice 6

⚠ DANGER

To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d’éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d’alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen.

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7

⚠ DANGER

Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d’une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8

⚠ DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d’alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d’interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

לפני סילוק FRU כלשהו, יש לכבות את המחשב, לנתק את כל כבלי החשמל משקעי החשמל, להוציא את מארז הסוללה, ואז לנתק כבלי חיבור אחרים אם יש כאלה.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

FRU を取り外す前に、 ThinkPad の電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Laser compliance statement

Some models of Lenovo computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，都会导致严重后果。

Pour éviter tout risque d’exposition au rayon laser, respectez les consignes de réglage et d’utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállításoktól és vezérlésektől eltérni a lézersugárzás veszélye miatt kockázatos !

L’utilizzo di controlli, regolazioni o l’esecuzione di procedure diverse da quelle specificate possono provocare l’esposizione a.

Использование элементов настройки и выполнение процедур иных, чем указано здесь, может привести к опасному радиационному облучению.

Použitie kontrôl, úprav alebo iných vykonaní od iných výrobcov, ako je v tomto špecifikované, mohlo by mať za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open**.

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

⚠ DANGER

Emits visible and invisible laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz.

开启时会有激光发射时，请勿盯视激光光束，请勿直接查看视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést!

Aprendo l’unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici e evitare l’esposizione diretta al fascio.

Открывая, берегитесь лазерного излучения. Не смотрите на луч, не разглядывайте его с помощью оптических инструментов, а также избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu pohľadu a nehľadte priamo s optickými nástrojmi do lúča a vyhnite sa priamemu vystaveniu lúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見たりしないでください。

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

Important service information

This chapter presents the following important service information:

- “Strategy for replacing FRUs” on page 16
  - “Strategy for replacing a hard disk drive” on page 17
  - “Important notice for replacing a system board” on page 17
- “Important information about replacing RoHS compliant FRUs” on page 18

Important:

BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site:
http://support.lenovo.com.

Strategy for replacing FRUs

Before replacing parts:

Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.

After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.

To download software fixes, drivers, and BIOS, follow the steps below:

1. Go to http://support.lenovo.com.
2. Enter the serial number or select a product or use Lenovo smart downloading.
3. Select the BIOS/Driver/Applications and download.
4. Follow the directions on the screen and install the necessary software.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:

- If you are instructed to replace an FRU, but the replacement does not solve the problem, reinstall the original FRU before you continue.
- Some computers have both a processor board and a system board. If you are instructed to replace either of them, and replacing one of them does not solve the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs one by one to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive. This will cause all customer data on the hard disk to be lost. Make sure that the customer has a current backup of the data before performing this action.

Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

- Do not drop the system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending the system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. If the original FRU parts are non-compliant, replacement parts can also be non-compliant. In all cases if the original FRU parts are RoHS compliant, the replacement part must also be RoHS compliant.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transit to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule in the EU. Products sold in 2005 and 2006 will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, failed RoHS compliant parts must always be replaced with RoHS compliant ones, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs may be used.

Products marketed before June 2006		Products marketed after June 2006	
Current or original part	**Replacement FRU**	**Current or original part**	**Replacement FRU**
Non-RoHS	Can be Non-RoHS	Must be RoHS	Must be RoHS
Non-RoHS	Can be RoHS		
Non-RoHS	Can sub to RoHS		
RoHS	Must be RoHS		

Note: A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of the order.

General checkout

This chapter presents the following information:

- “What to do first” on page 20
- “Power system checkout” on page 21

Before you go to the checkout, make sure to read the following important notes:

Important notes:

- **Only certified trained personnel can service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **Carefully remove screws for reuse when replacing FRUs.**
- **Be extremely careful during such write operations as copying, saving, or formatting.** Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- **Replace an FRU only with another FRU of the correct model.** When you replace an FRU, make sure that the machine model and the FRU part number are correct by referring to the FRU parts list.
- **An FRU should not be replaced just because of a single, unreproducible failure.** Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error logs and run the test again. If the error does not recur, do not replace the FRU.
- **Be careful not to replace a nondefective FRU.**

What to do first

When you do return an FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

1. Name and phone number of servicer
2. Date of service
3. Date on which the machine failed
4. Date of purchase
5. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

The following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disk insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect AC adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Power system checkout

To verify a symptom, follow the steps below:

1. Turn off the computer.
2. Remove the battery pack.
3. Connect the AC adapter.
4. Make sure that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the AC adapter and install the charged battery pack.
7. Make sure that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- “Checking the AC adapter” on page 21
- “Checking operational charging” on page 21
- “Checking the battery pack” on page 22

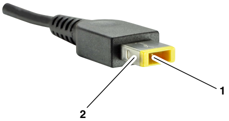
Checking the AC adapter

You are here because the computer fails only when the AC adapter is used.

- If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.
- If the computer does not charge during operation, go to “Checking operational charging”.

To check the AC adapter, follow the steps below:

1. Unplug the AC adapter cable from the computer.
2. Measure the output voltage at the plug of the AC adapter cable. See the following figure:



Pin	Voltage (V DC)
1	+20
2	0

Note: Output voltage for the AC adapter pin No. 2 may differ from the one you are servicing.

3. If the voltage is not correct, replace the AC adapter.
4. If the voltage is acceptable, do the following:

- Replace the system board.
- If the problem persists, go to “Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75” on page 26.

Note: Noise from the AC adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

Checking the battery pack

Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows® taskbar and wait for a moment (but do not click it), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note: If the battery pack becomes hot, it may not be able to be charged. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

Related service information

This chapter presents the following information:

- “Restoring the factory contents by using OneKey Recovery” on page 23
- “Passwords” on page 24
- “Power management” on page 25

Restoring the factory contents by using OneKey Recovery

Restore of factory default

The Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75 computers come with pre-installed OneKey Recovery System. In order to save application files and the initial backed up files of the system, the hard disk in a Lenovo computer includes a hidden partition when it is shipped. If you need to restore the system to the point of your first boot up, just enter Lenovo OneKey Recovery System and run **System Recovery**. For details of OneKey Recovery System, see *the User Guide for Lenovo OneKey Recovery system.*

Note: This will delete all the new data on the system partition (C drive), which is not recoverable. Make sure to back up your critical data before you perform this action.

When you use the recovery discs to boot your computer, the system will enter the user interface for system recovery automatically. Please follow the prompt to insert the backup discs to complete the whole recovery process.

Note: The recovery process might take up to 2 hours.

Passwords

As many as three passwords may be needed for any Lenovo computer: the power-on password (POP), the hard disk password (HDP), and the administrator password.

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Hard-disk password

There are two hard-disk passwords (HDPs):

+ User HDP - for the user

+ Master HDP - for the system administrator, who can use it to get access to the hard disk drive even if the user has changed the user HDP

Attention: If the user HDP has been forgotten, check whether a master HDP has been set. If it has, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenov authorized service technicians provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

Administrator password

Administrator password controls the access of the whole setup utility. Only Administrator password was set then User password can be set. If Administrator password was cleared, the User password was cleared too.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has three power management modes: screen blank, sleep (standby), and hibernation.

Screen blank state

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off. You can also turn off the LCD backlight by pressing F9.

To end screen blank state and resume normal operation, press F9.

Putting the computer to sleep or shutting it down

When you have finished working with your computer, you can put it to sleep or shut it down.

Putting your computer to sleep

If you will be away from your computer for only a short time, put the computer to sleep. When the computer is in sleep mode, you can quickly wake it to resume use, bypassing the startup process. To put the computer to sleep, do one of the following:

- Close the display panel.
- Press the power button.
- Open the Charms and then select **Settings** ⚙ → **Power** ⏻ → **Sleep**.

Attention: Wait until the power indicator light starts blinking (indicating that the computer is in sleep mode) before you move your computer. Moving your computer while the hard disk is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following:
- Press any key on the keyboard.
- Press the power button.

Shutting down the computer

If you are not going to use your computer for a long time, shut it down. To shut down your computer:

- Open the charms bar, then select **Settings** ⚙ → **Power** ⏻ → **Shut down.**
- Right-click the **Start** button in the lower-left corner and select **Shut down or sign out** → **Shut down**.

Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75

This chapter presents the following product-specific service references and product-specific parts information:

- “Specifications” on page 26
- “Status indicators” on page 29
- “Hotkeys” on page 30
- “FRU replacement notices” on page 31
- “Removing and replacing an FRU” on page 32
- “Locations” on page 66
- “Parts list” on page 68

Specifications

The following table lists the specifications of the Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75:

Table 1. Specifications

Feature	Description
Processor	• See the system properties of your computer, you can do this as follows: Open the **Control Panel**, and then select **System and Security** → **System**.
Bus architecture	• **G40-30** GPU: PCIe 2.0, 5GT/s WLAN: PCIe 1.0, 2.5GT/s RAM: DDR3L, 1066MT/s,1333MT/s LCD: eDP 1.3, 2.7GT/s HDMI Port: HDMI 1.4, 1.65GT/s HDD: SATA 2.0, 3Gb/s ODD: SATA 1.0, 1.5Gb/s USB Port: USB 3.0, 5Gb/s USB 2.0, 480Mb/s BT: USB2.0, 480Mb/s Card Reader: SD3.0, 50Mb/s SMBus 2.0 LPC 1.1 HDA SPI

Table 1. Specifications (continued)

Feature	Description
Bus architecture (continued)	• **G40-45** GPU: GPP (General Purpose Port), PCIe 2.0, 5GT/s WLAN: PCIe 1.0, 2.5GT/s RAM: DDR3L, 1600MT/s MAX → 1 DIMM DDR3L, 1333MT/s MAX → 2 DIMM DMI x 4, N/A → NO SUPPORT FDI x 2, N/A → NO SUPPORT LCD: eDP 1.2, 5.4GT/s HDMI Port: HDMI 1.4, 1.65GT/s HDD: SATA 3.0, 6Gb/s ODD: SATA 1.0, 1.5Gb/s USB Port: USB 3.0, 5Gb/s USB 2.0, 480Mb/s BT: USB2.0, 480Mb/s Card Reader: SD3.0, 50Mb/s VGA: VESA 1.1 , Integrated VGA support up to 1920x1200@ 60Hz & 30bpp SMBus 2.0, 100KHz LPC 1.1 HD Audio: 1.5V bus SPI: up to 100 MHz • **G40-70:** 1600MHz DDR3 SDRAM (PC3-12800S) PCI Express bus DMI • **G40-70m/Z40-70/Z40-75:** GPU: PCIe 2.0, 5GT/s WLAN: PCIe 1.0, 2.5GT/s RAM: DDR3L, 1600MT/s LCD: eDP 1.2, 5.4GT/s HDMI Port: HDMI 1.4, 1.65GT/s HDD: SATA 3.0, 6Gb/s ODD: SATA 1.0, 1.5Gb/s USB Port: USB 3.0, 5Gb/s USB 2.0, 480Mb/s BT: USB2.0, 480Mb/s Card Reader: SD3.0, 50Mb/s VGA: DP to VGA (G40-70m/Z40-70) VGA: VGA (Z40-75m) SMBus 2.0 LPC 1.1 HDA SPI

Table 1. Specifications (continued)

Feature	Description
Graphic memory chip	• Integrated/AMD Jel LE
Display	• 14.0" 16:9, 1,366 × 768 pixels
Standard memory	• DDR3L-1,600 MHz SODIMM × 2 (max 16 GB)
CMOS RAM	• 256 Bytes
Hard disk drive	• 2.5-inch, 7 mm / 9.5 mm SATA • 320 GB / 500 GB / 1TB 5,400 rpm
Optical drive	• Internal 9.0 mm (Rambo)
I/O port	• Combo audio jack × 1 • RJ45 × 1 • HDMI port × 1 • USB 2.0 port × 2, USB 3.0 port × 1 • 2 in 1 slot × 1 (SD/MMC)
Audio	• 1/8" Combo audio jack • 1.5 W speakers × 2 • Array Microphone
Ethernet (on the system board)	• 10/100/1,000 Mbps
Bluetooth wireless	• Combined in combo card
Keyboard	• 6 rows Lenovo Keyboard
Touchpad	• Multi-touch type
Integrated camera	• HD (720p)/0.3 M
Battery	• 4 cell, 2,200 mAh / 2,800 mAh
AC adapter	• 20 V, 65 W or 45 W
Pre-installed operating system	• Windows 8.1

Status indicators

The system status indicators below show the computer status:

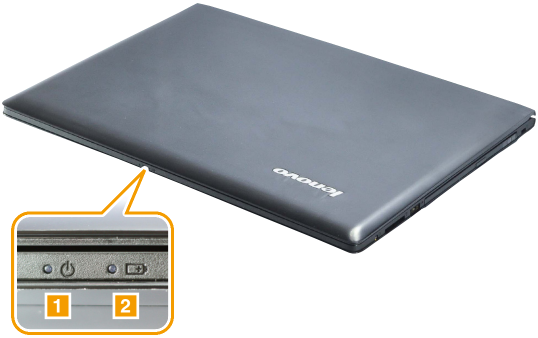


Table 2. Status indicators

Indicator	Indicator status	Charge status	Meaning
1 Power ⏻	On (solid white)	---	The computer is powered on.
	Blinking	---	The computer is in sleep mode.
	Off	---	The computer is powered off.
2 Battery 🔋	On (solid white)	Charging	The battery has more than 80% charge.
		Discharging	The battery has more than 20% charge.
	On (solid amber)	Discharging	The battery has between 5% and 20% charge.
	Blinking slowly (white)	Charging	The battery has between 20% and 80% charge. When the battery reaches 80% charge, the light will stop blinking. However, charging will continue until the battery is fully charged.
	Blinking slowly (amber)	Charging	The battery has less than 20% charge. When the battery charge reaches 20%, the blinking color will change to white.
	Blinking quickly (amber)	Charging/ Discharging	The battery has less than 5% charge.

Hotkeys

You can access certain system settings quickly by pressing the appropriate hotkeys.

Table 3. Hotkeys

F1 :	Mutes/unmutes the sound.
F2 :	Decreases the volume level.
F3 :	Increases the volume level.
F4 :	Closes the currently active window.
F5 :	Refreshes the desktop or the currently active window.
F6 :	Enables/disables the touchpad.
F7 :	Enables/disables Airplane mode.
F8 :	Displays all currently active apps.
F9 :	Turns on/off the backlight of the LCD screen.
F10 :	Toggles the display between the computer and an external device.
F11 :	Decreases display brightness.
F12 :	Increases display brightness.

FRU replacement notices

This section presents notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

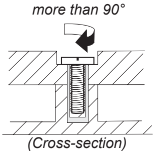
Do the following when you service this machine:

- Keep the screw kit in your tool bag.
- Carefully remove screws for reuse when replacing FRUs.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

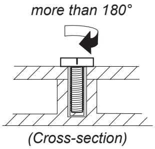
- **Plastic to plastic**

  Turn an additional 90° after the screw head touches the surface of the plastic part:



- **Logic card to plastic**

  Turn an additional 180° after the screw head touches the surface of the logic card:



- **Torque driver**

  If you have a torque screwdriver , refer to the “Torque” column for each step.
- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Carefully remove screws for reuse when replacing FRUs. Make sure that all screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with the instructions to indicate how to remove and replace the FRU. Make sure to observe the following general rules:

1. Do not attempt to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review "FRU replacement notices" on page 31.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any of such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps to remove the FRU, as given in the figures by the numbers in square callouts.
5. When turning a screw to replace an FRU, turn it in the direction as given by the arrow in the figure.
6. When removing the FRU, move it in the direction as given by the arrow in the figure.
7. To put the new FRU in place, reverse the removal procedures and follow any of the notes that pertain to replacement. For information about connecting and arranging internal cables, see "Locations" on page 66.
8. When replacing an FRU, use the correct screw as shown in the procedures.

⚠ DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any of the interconnecting cables.

Attention: After replacing an FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove potential shock reasons.

Notes:

- The following procedures about removing and replacing FRUs are the same for the Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75.
- The illustrations used in this section are of the Lenovo G40-70, unless otherwise stated.

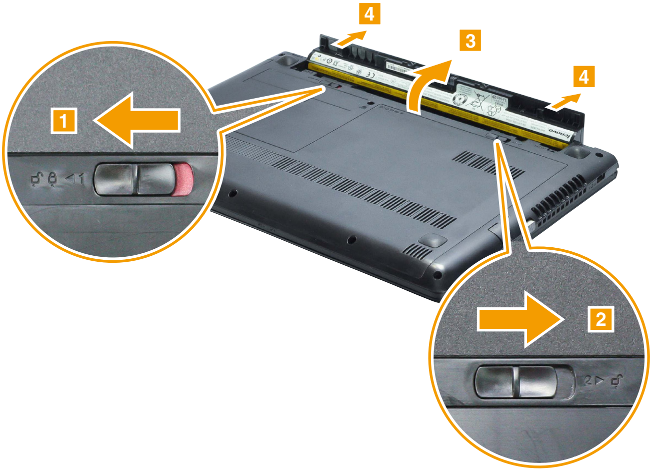
1010 Battery pack

⚠ **DANGER**

Only use the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Figure 1. Removal steps of battery pack

Unlock the manual latch **1**. Slide the spring-loaded latch to the unlocked position **2** to eject the battery pack. Lift up the inner edge of the battery pack, pivoting it on the outer edge **3**. Gently raise the battery pack in the indicated direction **4** to remove it.



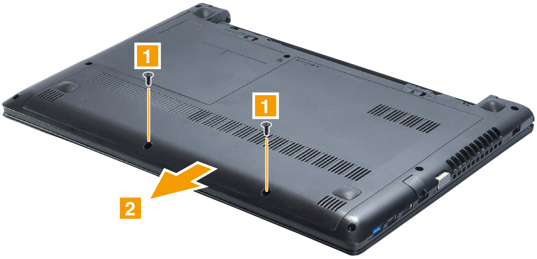
1020 Base cover

For access, remove this FRU:

- “1010 Battery pack” on page 33

Figure 2. Removal steps of base cover

Remove the screws 1. Then remove the base cover 2.



Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (2) Big Door to D	Black	1.5 ~ 2.0 kgf*cm

Note: Applying labels to the base cover

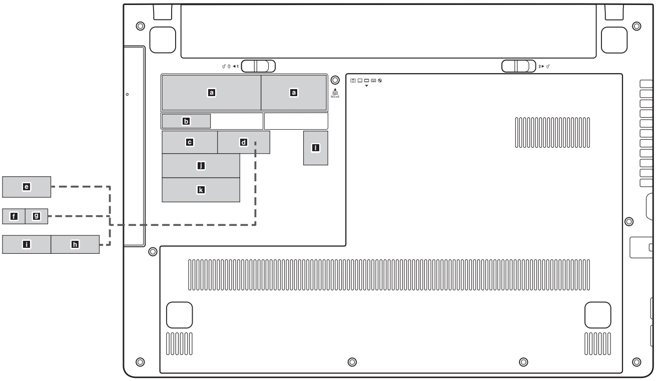
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following label:

The following labels need to be peeled off from the old base cover and put on the new base cover.

a	Rating label
b	Indonesia D side label
c	Brazil BT label
d	Brazil WL label
e	Israel WL label
f	SIRIM BT label
g	SIRIM WL label
h	WL label for US/CA/TW/Indonesia
i	BT label for US/CA/TW/Indonesia
j	KCC label
k	BIS label
l	Windows 8 OS label

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

For the location of each label, refer to the following figure:



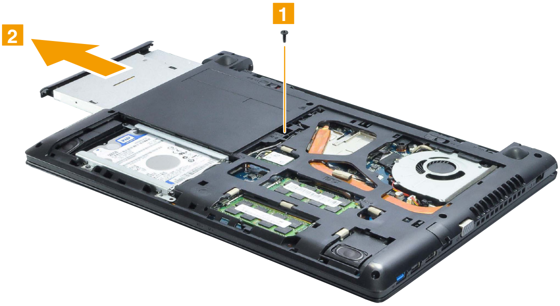
1030 Optical drive

For access, remove this FRU:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34

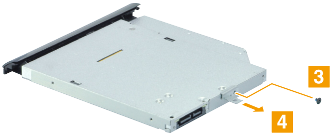
Figure 3. Removal steps of optical drive

Remove the screw 1. Pull the optical drive out in the direction shown by arrow 2.



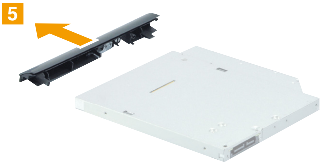
Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (1) ODD BKT to D to KB	Black	1.5 ~ 2.0 kgf*cm

Remove the screw 3, then remove the optical drive bracket in the direction shown by arrow 4.



Step	Screw (quantity)	Color	Torque
3	M2 × 3.5 mm, flat-head, nylok-coated (1) ODD BKT to ODD	Black	1.5 ~ 2.0 kgf*cm

Carefully remove the optical drive bezel in the direction shown by arrow 5.



1040 Hard disk drive

For access, remove these FRUs in order:

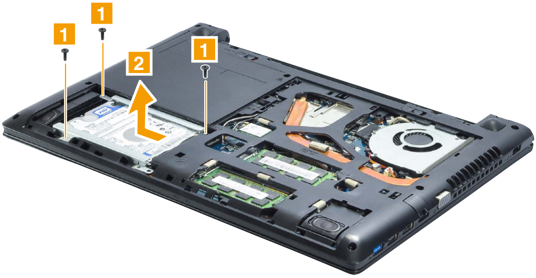
- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34

Attention:

- **Do not drop the hard disk drive or apply any physical shock to it.** The hard disk drive is sensitive to physical shock. Improper handling can cause damage and permanent loss of data.
- Before removing the drive, suggest the customer to backup all the information on it if possible.
- Never remove the drive while the system is operating or in suspend mode.

Figure 4. Removal steps of hard disk drive

Remove the screws **1**. Detach the HDD connector and then remove the hard disk drive from the slot in the direction shown by arrow **2**.

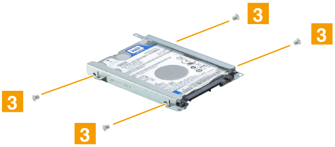


Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (3) HDD BKT to D	Black	1.5 ~ 2.0 kgf*cm

When installing: Make sure that the HDD connector is attached firmly.

Figure 4. Removal steps of hard disk drive (continued)

Remove the screws 3 and detach the metal frame from the hard disk drive.



Step	Screw (quantity)	Color	Torque
3	M2 × 3.5 mm, flat-head, nylok-coated (4) HDD BKT to HDD	Black	1.5 ~ 2.0 kgf*cm

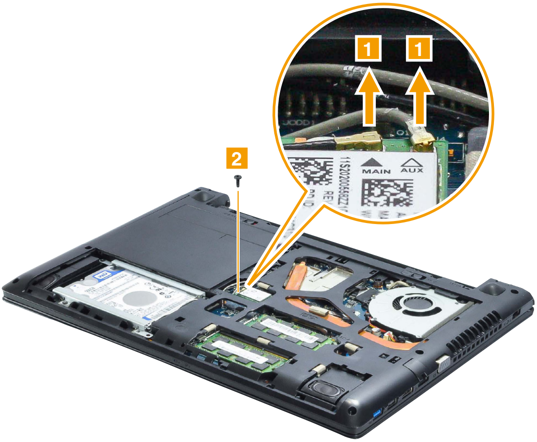
1050 PCI Express Mini Card for wireless LAN

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34

Figure 5. Removal steps of PCI Express Mini Card for wireless LAN

Disconnect the two wireless LAN cables (black, grey) 1, and then remove the screw 2.



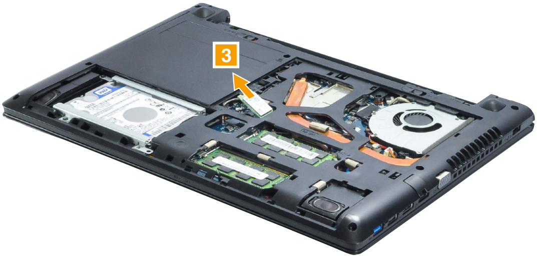
In step 1, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159), or pick up the connectors with your fingers and gently unplug them in the direction shown by the arrows.

Notes: The wireless LAN card has 2 cables in step 1.
The wireless LAN card in some models might have 3 cables in step 1.

Step	Screw (quantity)	Color	Torque
2	M2 × 3.5 mm, flat-head, nylok-coated (1) NGFF to MB	Black	1.5 ~ 2.0 kgf*cm

Figure 5. Removal steps of PCI Express Mini Card for wireless LAN (continued)

Remove the card in the direction shown by arrow 3.



When installing:

- In models with a wireless LAN card that has two antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **MAIN**, and the grey cable (2nd) (AUX) into the jack labeled **AUX** on the card.
- In models with a wireless LAN card that has three antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, the grey cable (3rd) into the jack labeled **3**, and the white cable (2nd) (AUX) into the jack labeled **2** on the card.

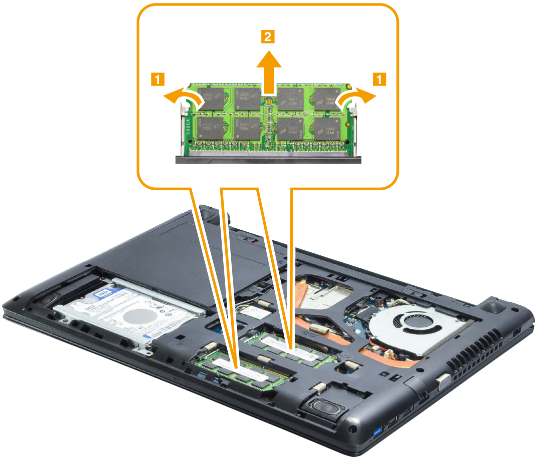
1060 DIMM

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34

Figure 6. Removal steps of DIMM

Release the two latches on both edges of the socket at the same time in the directions shown by arrows 1, and then unplug the DIMM in the direction shown by arrow 2.



When installing: Insert the notched end of the DIMM into the socket. Push the DIMM firmly, and pivot it until it snaps into place. Make sure that it is firmly fixed in the slot and is difficult to move.

Note: When replacing the memory is completed, you need to restart the computer after the first reboot.

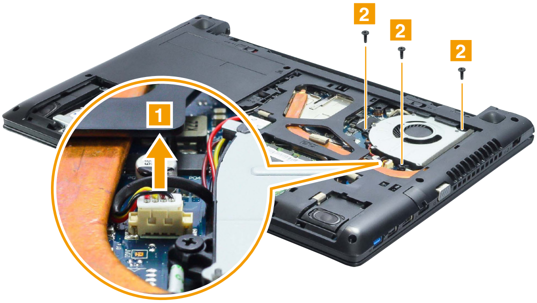
1070 Fan assembly

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34

Figure 7. Removal steps of fan assembly

Unplug the fan connector in the direction shown by arrow 1. Then remove the screws 2.



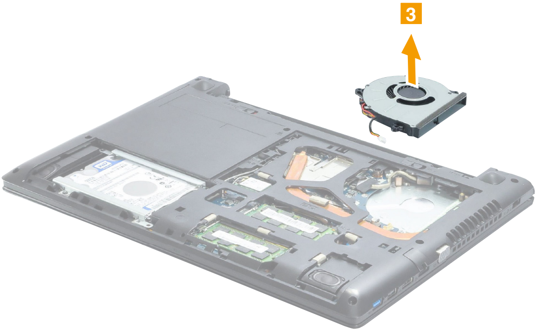
Note: Be careful not to damage the connector.

Step	Screw (quantity)	Color	Torque
2	M2 × 3.5 mm, flat-head, nylok-coated (3) FAN to C	Black	1.5 ~ 2.0 kgf*cm

When installing: Make sure that the connector is attached firmly.

Figure 7. Removal steps of fan assembly (continued)

Remove the fan 3.



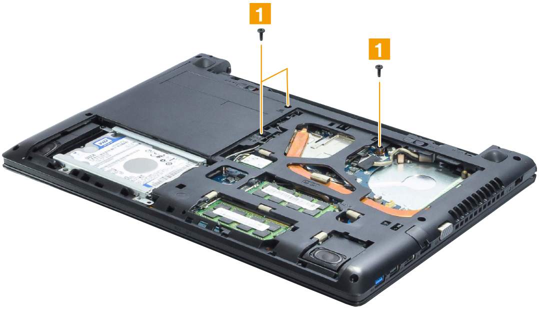
1080 Keyboard

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34
- “1070 Fan assembly” on page 42

Figure 8. Removal steps of keyboard

Remove the screws 1.



Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (3) KB + D	Black	1.5 ~ 2.0 kgf*cm

Figure 8. Removal steps of keyboard (continued)

Insert the screwdriver into the bottom hole 2. Then pull the keyboard out of the keyboard bezel 3.

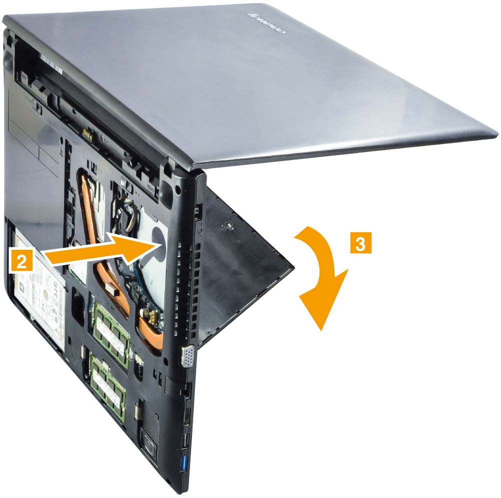
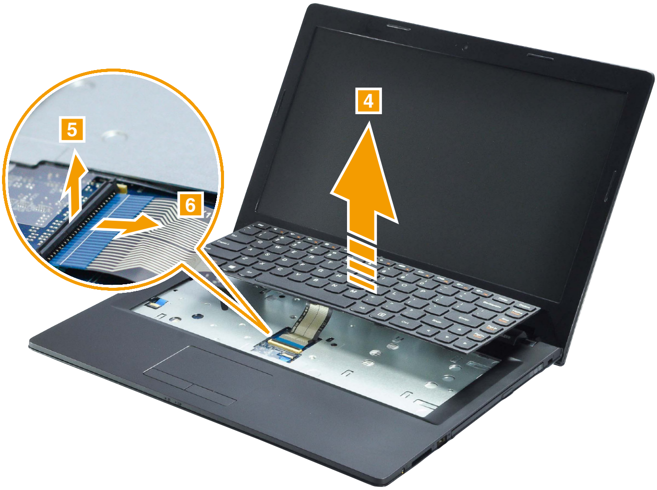


Figure 8. Removal steps of keyboard (continued)

Lift the keyboard slightly 4. Detach the connectors in the directions shown by arrows 5 and 6. Then remove the keyboard.



When installing: Make sure that the FPC connector is attached firmly.

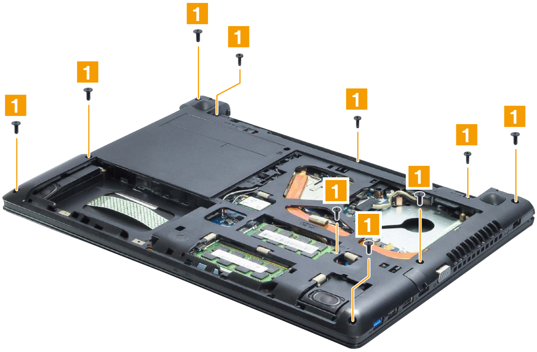
1090 Keyboard bezel

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34
- "1030 Optical drive" on page 36
- "1040 Hard disk drive" on page 37
- "1070 Fan assembly" on page 42
- "1080 Keyboard" on page 44

Figure 9. Removal steps of keyboard bezel

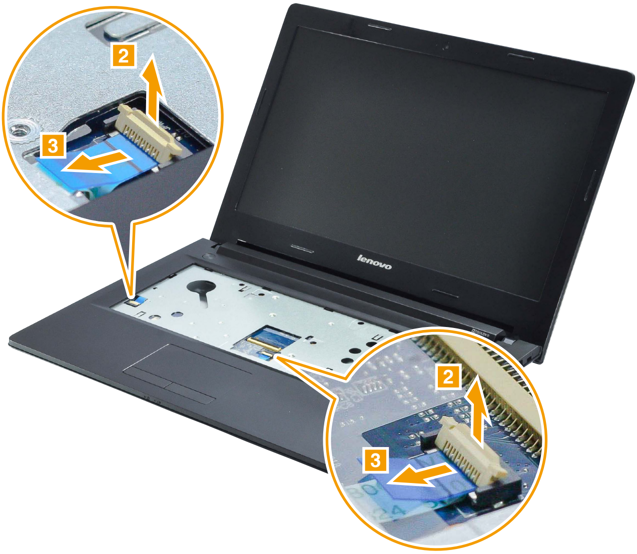
Remove the screws 1.



Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (10) D to C (type2)	Black	1.5 ~ 2.0 kgf*cm

Figure 9. Removal steps of keyboard bezel (continued)

Disconnect the touchpad cable connector and the power board connector in the directions shown by arrows 2 and 3.



Remove the keyboard bezel in the direction shown by arrow 4.

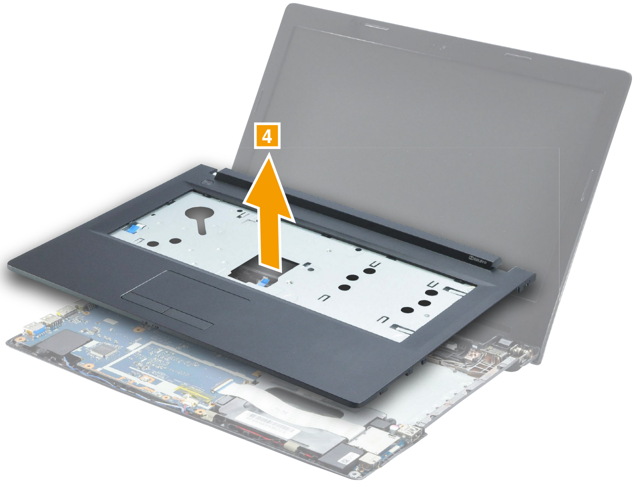
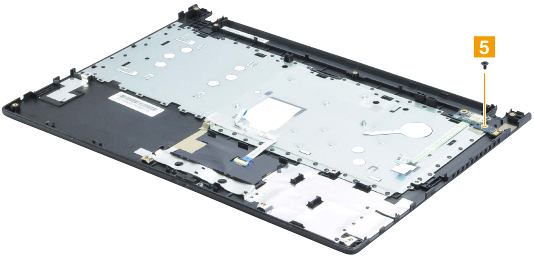


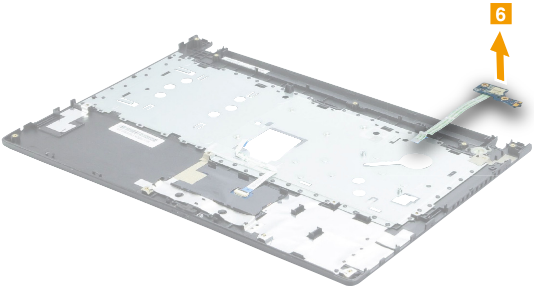
Figure 9. Removal steps of keyboard bezel (continued)

Remove the screw 5.



Step	Screw (quantity)	Color	Torque
5	M2 × 3.5 mm, flat-head, nylok-coated (1) Power BD to C	Black	1.5 ~ 2.0 kgf*cm

Carefully remove the power board in the direction shown by arrow 6.



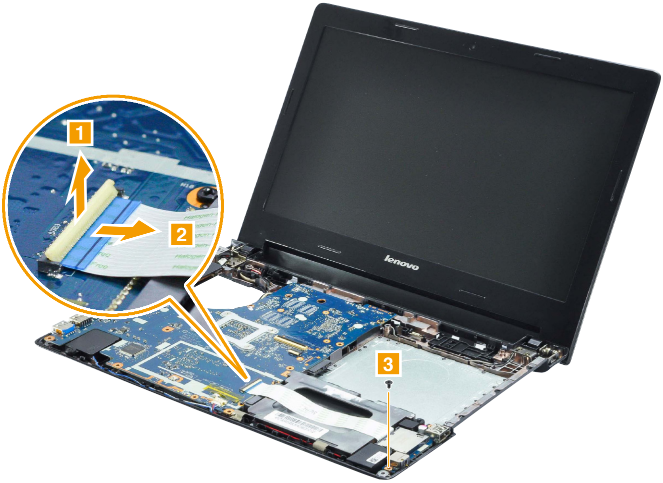
1100 USB&audio board

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34
- “1030 Optical drive” on page 36
- “1040 Hard disk drive” on page 37
- “1050 PCI Express Mini Card for wireless LAN” on page 39
- “1070 Fan assembly” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47

Figure 10. Removal steps of USB&audio board

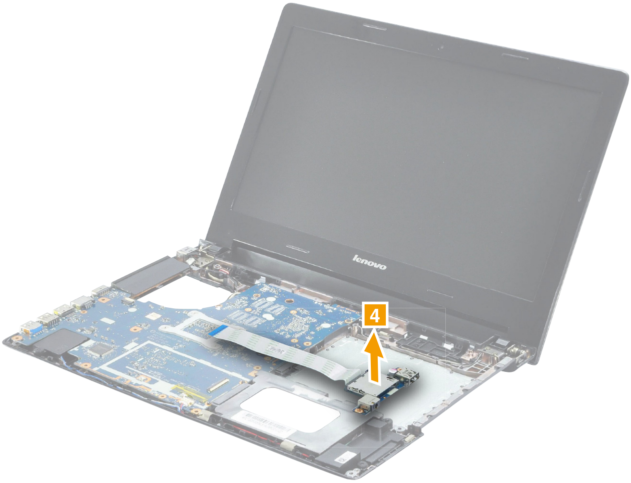
Detach the USB&audio board connector in the directions shown by arrows 1 and 2. Remove the screw 3.



Step	Screw (quantity)	Color	Torque
3	M2 × 3.5 mm, flat-head, nylok-coated (1) Audio BD to D	Black	1.5 ~ 2.0 kgf*cm

Figure 10. Removal steps of USB&audio board (continued)

Remove the USB&audio board **4**.



1110 System board

Important notices for handling the system board:

When handling the system board, bear the following in mind.

- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- During the whole process, make sure not to drop or stack the system board.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34
- "1030 Optical drive" on page 36
- "1040 Hard disk drive" on page 37
- "1050 PCI Express Mini Card for wireless LAN" on page 39
- "1070 Fan assembly" on page 42
- "1080 Keyboard" on page 44
- "1090 Keyboard bezel" on page 47
- "1100 USB&audio board" on page 50

Figure 11. Removal steps of system board

Disconnect the two connectors in the directions shown by arrows **1** and **2**.

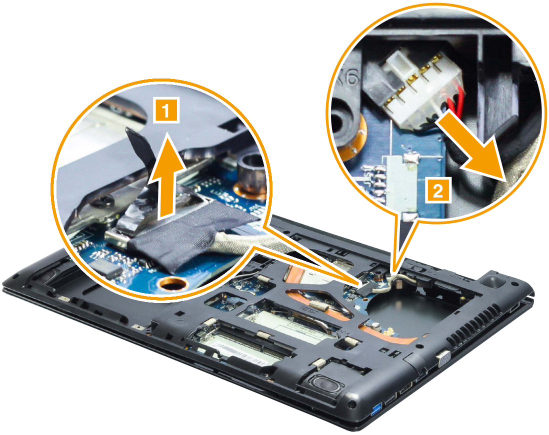
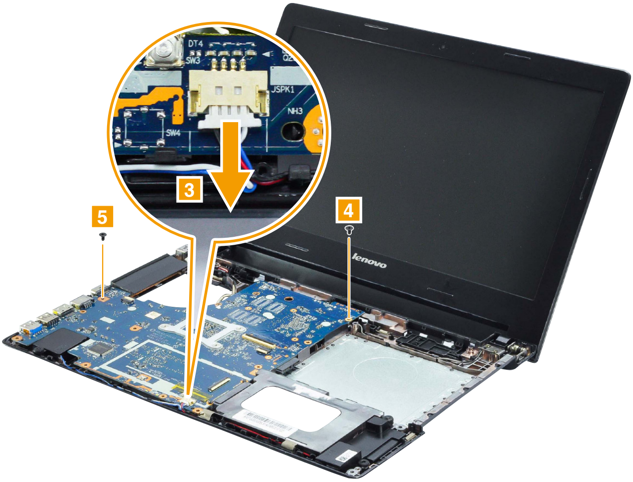


Figure 11. Removal steps of system board (continued)

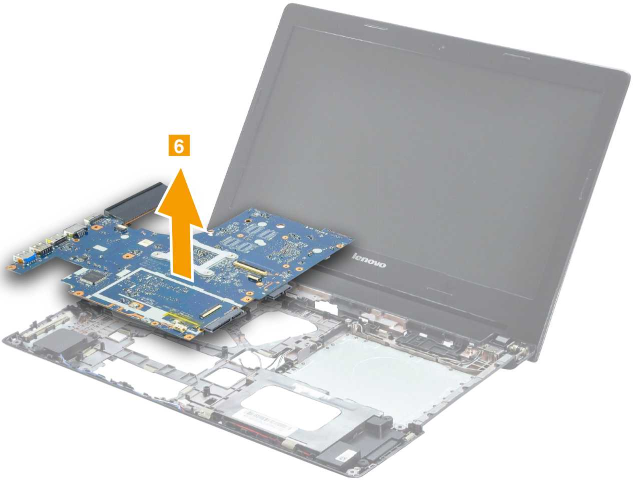
Unplug the speaker connector in the direction shown by arrow 3. Remove the screws 4 and 5.



Step	Screw (quantity)	Color	Torque
4	M2 × 3.5 mm, flat-head, nylok-coated (1) MB to D	Black	1.5 ~ 2.0 kgf*cm
5	M2 × 3.5 mm, flat-head, nylok-coated (1) MB to D (on select models)	Black	1.5 ~ 2.0 kgf*cm

Figure 11. Removal steps of system board (continued)

Remove the system board in the direction shown by arrow 6.



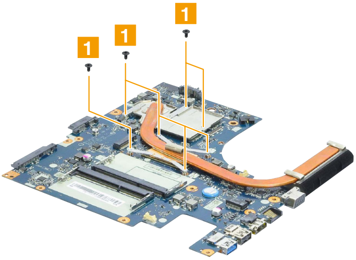
1120 Heat sink assembly

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34
- “1030 Optical drive” on page 36
- “1040 Hard disk drive” on page 37
- “1050 PCI Express Mini Card for wireless LAN” on page 39
- “1070 Fan assembly” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 USB&audio board” on page 50
- “1110 System board” on page 52

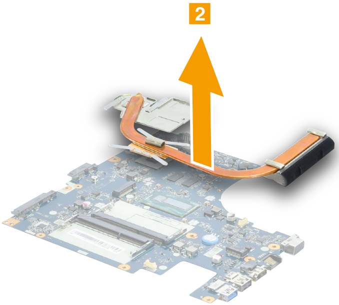
Figure 12. Removal steps of heat sink assembly

Remove the screws 1.



Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (7) (G40-30/G40-45/G40-70) CPU BKT to MB, GPU BKT to MB	Black	1.5 ~ 2.0 kgf*cm
1	M2 × 3.5 mm, flat-head, nylok-coated (6) (G40-70m/Z40-70/Z40-75) CPU BKT to MB, GPU BKT to MB	Black	1.5 ~ 2.0 kgf*cm

Lift the heat sink assembly in the direction shown by arrow 2.



1130 Speakers and DC-in cable

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34
- "1030 Optical drive" on page 36
- "1040 Hard disk drive" on page 37
- "1050 PCI Express Mini Card for wireless LAN" on page 39
- "1070 Fan assembly" on page 42
- "1080 Keyboard" on page 44
- "1090 Keyboard bezel" on page 47
- "1100 USB&audio board" on page 50
- "1110 System board" on page 52

Figure 13. Removal steps of speakers and DC-in cable

Remove the speakers in the direction shown by arrows **1**.

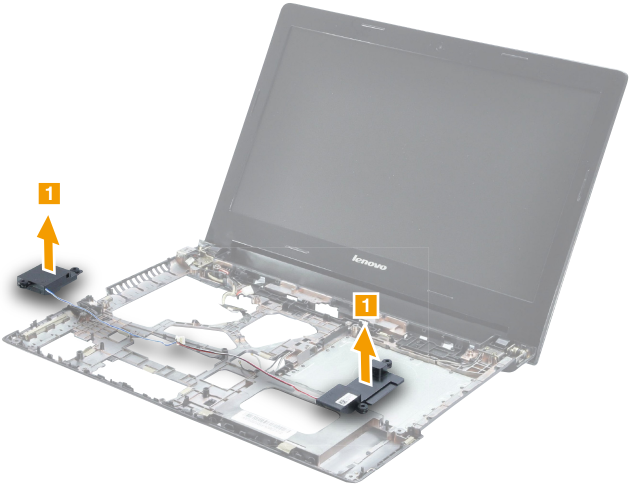
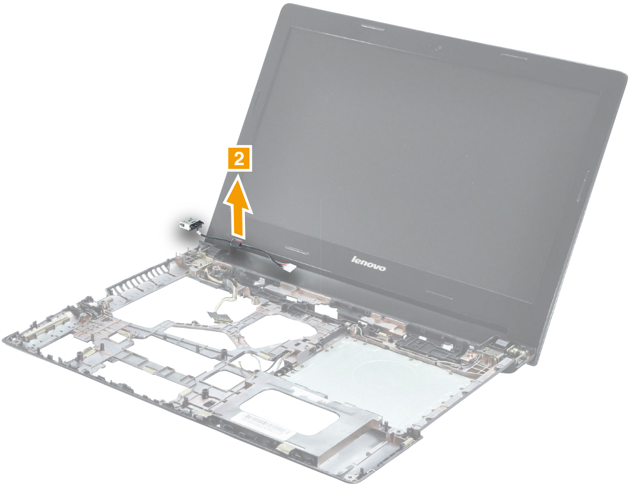


Figure 13. Removal steps of speakers and DC-in cable (continued)

Remove the DC-in cable in the direction shown by arrow 2.



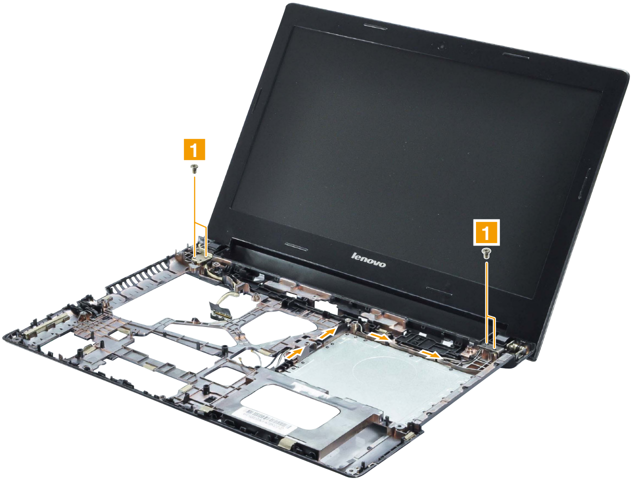
1140 LCD unit

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34
- "1030 Optical drive" on page 36
- "1040 Hard disk drive" on page 37
- "1050 PCI Express Mini Card for wireless LAN" on page 39
- "1070 Fan assembly" on page 42
- "1080 Keyboard" on page 44
- "1090 Keyboard bezel" on page 47
- "1100 USB&audio board" on page 50
- "1110 System board" on page 52
- "1130 Speakers and DC-in cable" on page 56

Figure 14. Removal steps of LCD unit

Release the antenna cables from the cable guides and then remove the screws **1**.



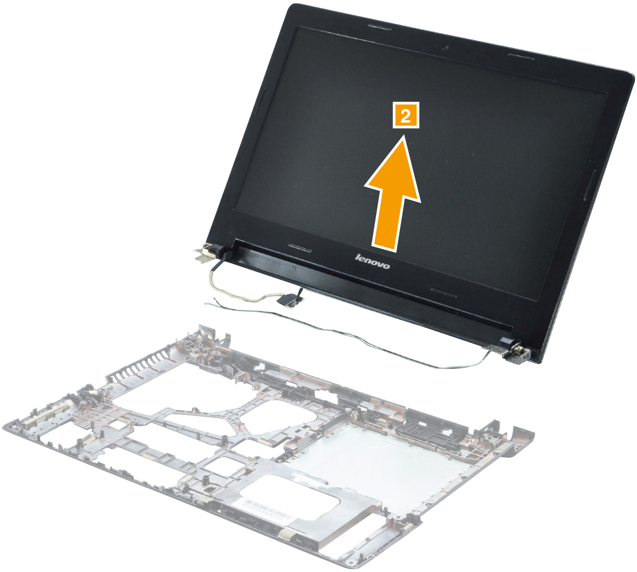
Step	Screw (quantity)	Color	Torque
1	M2 × 3.5 mm, flat-head, nylok-coated (4) LCD Module to D	Black	1.5 ~ 2.0 kgf*cm

When installing:

- Route the antenna cables along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.
- Make sure that the LCD connector is attached firmly and that you do not pinch the antenna cables when you attach the LCD assembly. Route the LCD cable along the cable guides.

Figure 14. Removal steps of LCD unit (continued)

Remove the LCD unit in the direction shown by arrow **2**.



1150 LCD front bezel, LCD panel, and hinges

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34
- “1030 Optical drive” on page 36
- “1040 Hard disk drive” on page 37
- “1050 PCI Express Mini Card for wireless LAN” on page 39
- “1070 Fan assembly” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 USB&audio board” on page 50
- “1110 System board” on page 52
- “1130 Speakers and DC-in cable” on page 56
- “1140 LCD unit” on page 58

Figure 15. Removal steps of LCD front bezel, LCD panel, and hinges

Remove the LCD front bezel in the direction shown by arrows **1**.

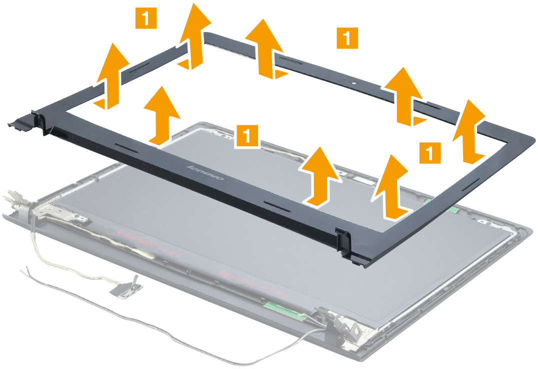
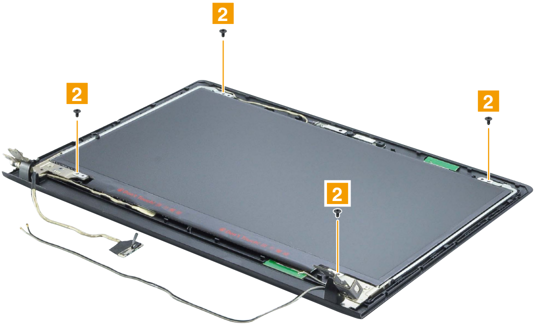


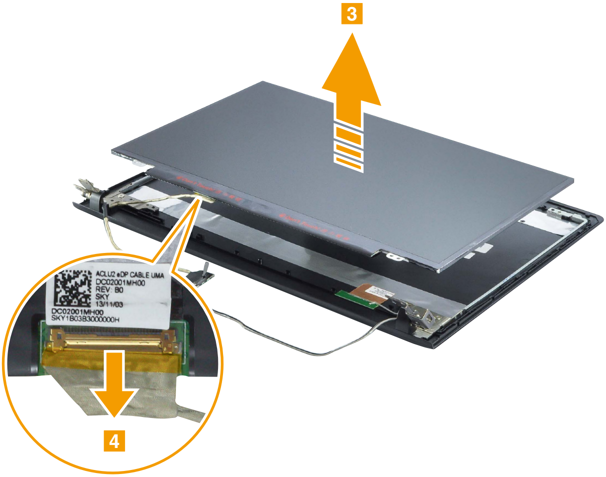
Figure 15. Removal steps of LCD front bezel, LCD panel, and hinges (continued)

Remove the screws 2.



Step	Screw (quantity)	Color	Torque
2	M2 × 3.5 mm, flat-head, nylok-coated (4) LCD Module to Hinge & A	Black	1.5 ~ 2.0 kgf*cm

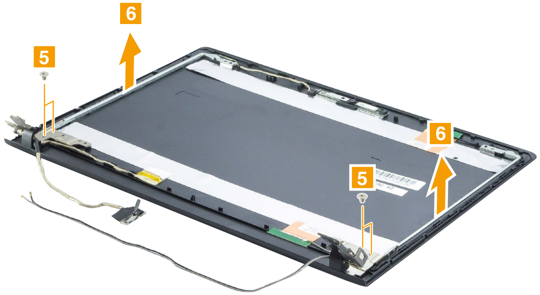
Lift the LCD panel slightly 3. Peel off the adhesive tape and detach the connector in the direction shown by arrow 4. Then remove the LCD panel.



When installing: Make sure that the metal connector is attached firmly.

Figure 15. Removal steps of LCD front bezel, LCD panel, and hinges (continued)

Remove the screws 5. Then release the hinges in the direction shown by arrows 6.



Step	Screw (quantity)	Color	Torque
5	M2 × 3.5 mm, flat-head, nylok-coated (4) Hinge L & R to A	Black	1.5 ~ 2.0 kgf*cm

1160 Camera

For access, remove these FRUs in order:

- “1010 Battery pack” on page 33
- “1020 Base cover” on page 34
- “1030 Optical drive” on page 36
- “1040 Hard disk drive” on page 37
- “1050 PCI Express Mini Card for wireless LAN” on page 39
- “1070 Fan assembly” on page 42
- “1080 Keyboard” on page 44
- “1090 Keyboard bezel” on page 47
- “1100 USB&audio board” on page 50
- “1110 System board” on page 52
- “1130 Speakers and DC-in cable” on page 56
- “1140 LCD unit” on page 58

Figure 16. Removal steps of camera

Detach the integrated camera connector in the direction shown by arrow **1**.

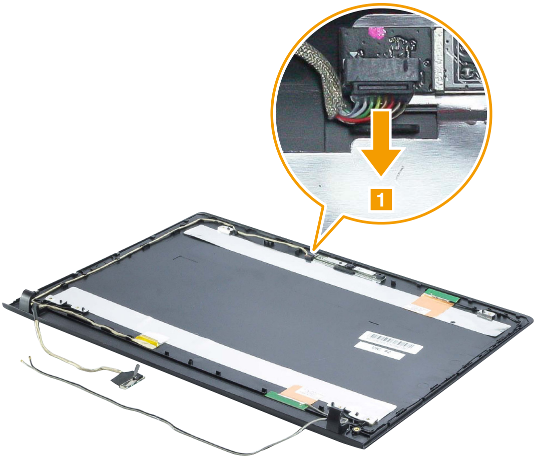
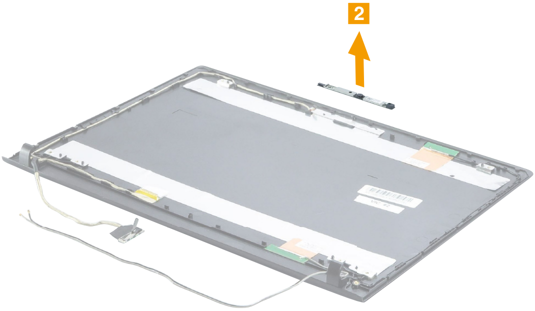


Figure 16. Removal steps of camera (continued)

Remove the camera in the direction shown by arrow 2.

Note: The integrated camera is stuck on the top center of the LCD cover.



When installing: Stick the integrated camera to the top center of the LCD cover and adjust its placement to make sure the connector is attached firmly.

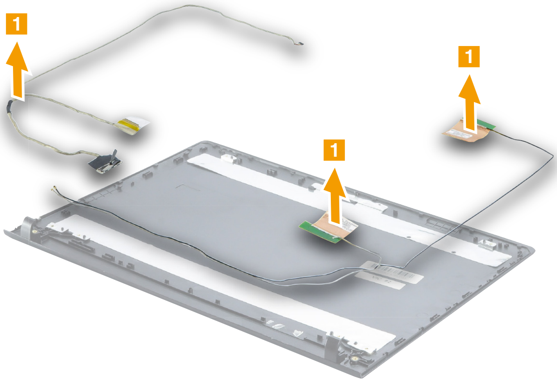
1170 LCD cable and antenna assembly

For access, remove these FRUs in order:

- "1010 Battery pack" on page 33
- "1020 Base cover" on page 34
- "1030 Optical drive" on page 36
- "1040 Hard disk drive" on page 37
- "1050 PCI Express Mini Card for wireless LAN" on page 39
- "1070 Fan assembly" on page 42
- "1080 Keyboard" on page 44
- "1090 Keyboard bezel" on page 47
- "1100 USB&audio board" on page 50
- "1110 System board" on page 52
- "1130 Speakers and DC-in cable" on page 56
- "1140 LCD unit" on page 58
- "1150 LCD front bezel, LCD panel, and hinges" on page 60

Figure 17. Removal steps of LCD cable and antenna assembly

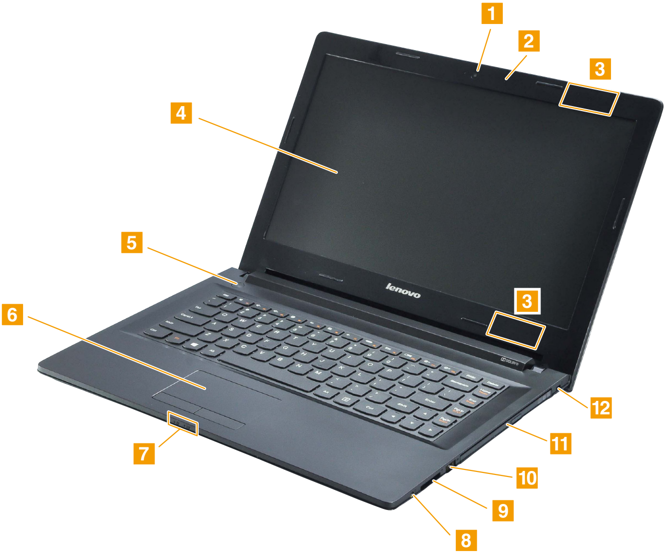
Remove the LCD cable and antenna assembly in the direction shown by arrows **1**.



Locations

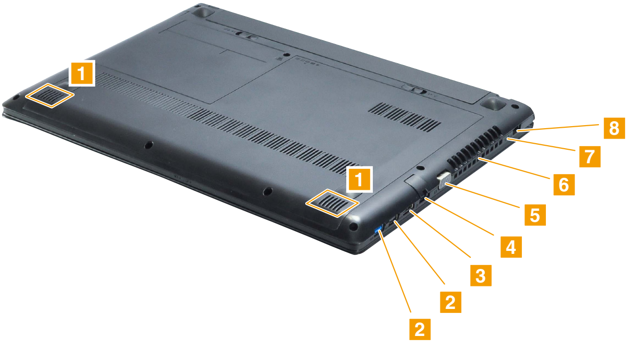
Front view and right-side view

1 Integrated camera
2 Built-in microphone
Note: Select models may have two microphones, please refer to the actual product.
3 Wireless LAN antennas
4 Computer display
5 Power button
6 Touchpad
7 System status indicators
Note: For the description of each indicator, see "Status indicators" on page 29.
8 Combo audio jack
9 Memory card slot
10 USB port
11 Optical drive
12 Kensington lock slot



Bottom and Left-side view

1 Speaker
2 USB port
3 HDMI port
4 RJ-45 port
5 VGA port
6 Fan louvers
7 Novo button
8 AC power adapter jack



Parts list

This section presents the following service parts:

- “Overall” on page 69
- “LCD FRUs” on page 77
- “Keyboard” on page 79
- “Miscellaneous parts” on page 81
- “AC adapters” on page 82
- “Screw” on page 82
- “Power cords” on page 83

Note:

Each FRU is available for all types or models, unless specific types or models are specified.

Attention:

Do not attempt to replace an FRU on your own. If an FRU is damaged, contact a Lenovo authorized servicer or a marketing representative for replacement or repair. Only qualified technicians can inspect or repair this product.

Overall

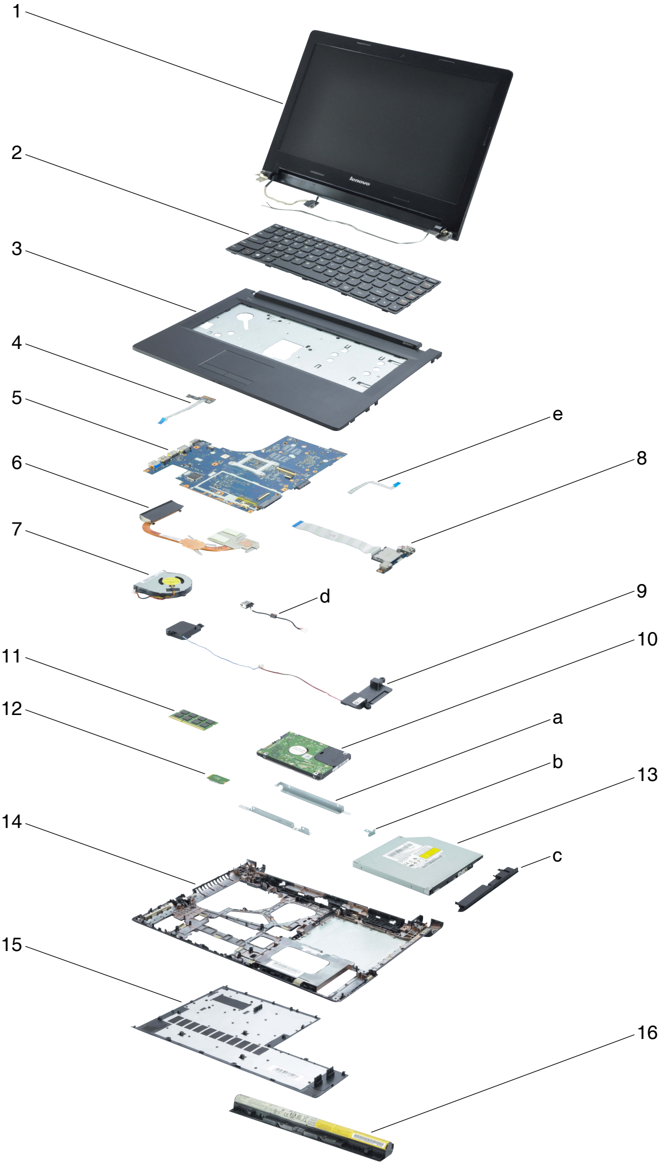

1
2
3
4
5
e
6
8
7
d
9
10
11
12
a
b
13
14
c
15
16

Table 4. Parts list—Overall

No.	FRU	FRU no.	CRU ID.
a-e	See “Miscellaneous parts” on page 81.		
1	LCD unit (see “LCD FRUs” on page 77.)		
2	Keyboard (see “Keyboard” on page 79.)		
3	ACLU1 Upper Case Black W/MB LED Sponge (G40-30/G40-45/G40-70/Z40-75)	90205106	N
3	ACLUG Upper Case Black M (Z40-70/G40-70m/Z40-75)	90205311	N
3	ACLUG Upper Case Silver H (Z40-70/G40-70m)	90205312	N
4	ACLU1 Power Board W/Cable (G40-30/G40-70/ Z40-70/G40-70m/Z40-75)	90005904	N
4	Power Board L G40-45 W/Cable (G40-45)	5C50F77269	N
5	ACLU9 MB N3520 1G 1000M (G40-30)	90007376	N
5	ACLU9 MB W8P N3520 1G 1000M (G40-30)	90007400	N
5	ACLU9 MB W8S N3520 1G 1000M (G40-30)	90007388	N
5	ACLU9 MB N3520 1G 100M (G40-30)	90007377	N
5	ACLU9 MB W8P N3520 1G 100M (G40-30)	90007401	N
5	ACLU9 MB W8S N3520 1G 100M (G40-30)	90007389	N
5	ACLU9 MB N2815 1G 1000M (G40-30)	90007378	N
5	ACLU9 MB W8P N2815 1G 1000M (G40-30)	90007402	N
5	ACLU9 MB W8S N2815 1G 1000M (G40-30)	90007390	N
5	ACLU9 MB N2815 1G 100M (G40-30)	90007379	N
5	ACLU9 MB W8P N2815 1G 100M (G40-30)	90007403	N
5	ACLU9 MB W8S N2815 1G 100M (G40-30)	90007391	N
5	ACLU9 MB N2920 1G 1000M (G40-30)	90007380	N
5	ACLU9 MB W8P N2920 1G 1000M (G40-30)	90007404	N
5	ACLU9 MB W8S N2920 1G 1000M (G40-30)	90007392	N
5	ACLU9 MB N2920 1G 100M (G40-30)	90007381	N
5	ACLU9 MB W8P N2920 1G 100M (G40-30)	90007405	N
5	ACLU9 MB W8S N2920 1G 100M (G40-30)	90007393	N
5	ACLU9 MB UMA N3520 1000M (G40-30)	90007382	N
5	ACLU9 MB W8P UMA N3520 1000M (G40-30)	90007406	N
5	ACLU9 MB W8S UMA N3520 1000M (G40-30)	90007394	N
5	ACLU9 MB UMA N3520 100M (G40-30)	90007383	N
5	ACLU9 MB W8P UMA N3520 100M (G40-30)	90007407	N
5	ACLU9 MB W8S UMA N3520 100M (G40-30)	90007395	N
5	ACLU9 MB UMA N2815 1000M (G40-30)	90007384	N
5	ACLU9 MB W8P UMA N2815 1000M (G40-30)	90007408	N
5	ACLU9 MB W8S UMA N2815 1000M (G40-30)	90007396	N
5	ACLU9 MB UMA N2815 100M (G40-30)	90007385	N
5	ACLU9 MB W8P UMA N2815 100M (G40-30)	90007409	N
5	ACLU9 MB W8S UMA N2815 100M (G40-30)	90007397	N
5	ACLU9 MB UMA N2920 1000M (G40-30)	90007386	N
5	ACLU9 MB W8P UMA N2920 1000M (G40-30)	90007410	N
5	ACLU9 MB W8S UMA N2920 1000M (G40-30)	90007398	N
5	ACLU9 MB UMA N2920 100M (G40-30)	90007387	N
5	ACLU9 MB W8P UMA N2920 100M (G40-30)	90007411	N
5	ACLU9 MB W8S UMA N2920 100M (G40-30)	90007399	N
5	L G40-45 UMA A6-6310 (G40-45)	5B20F77275	N
5	L G40-45 DIS A6-6310 2G (G40-45)	5B20F77262	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
5	L G40-45 DIS A6-6310 1G (G40-45)	5B20F77252	N
5	L G40-45 W8S UMA A6-6310 (G40-45)	5B20F77246	N
5	L G40-45 W8S DIS A6-6310 2G (G40-45)	5B20F77277	N
5	L G40-45 W8S DIS A6-6310 1G (G40-45)	5B20F77272	N
5	L G40-45 W8P UMA A6-6310 (G40-45)	5B20F77266	N
5	L G40-45 W8P DIS A6-6310 2G (G40-45)	5B20F77261	N
5	L G40-45 W8P DIS A6-6310 1G (G40-45)	5B20F77251	N
5	L G40-45 UMA A4-6210 (G40-45)	5B20F77245	N
5	L G40-45 DIS A4-6210 2G (G40-45)	5B20F77276	N
5	L G40-45 DIS A4-6210 1G (G40-45)	5B20F77270	N
5	L G40-45 W8S UMA A4-6210 (G40-45)	5B20F77264	N
5	L G40-45 W8S DIS A4-6210 2G (G40-45)	5B20F77265	N
5	L G40-45 W8S DIS A4-6210 1G (G40-45)	5B20F77256	N
5	L G40-45 W8P UMA A4-6210 (G40-45)	5B20F77253	N
5	L G40-45 W8P DIS A4-6210 2G (G40-45)	5B20F77247	N
5	L G40-45 W8P DIS A4-6210 1G (G40-45)	5B20F77278	N
5	L G40-45 UMA E2-6110 (G40-45)	5B20F77271	N
5	L G40-45 DIS E2-6110 2G (G40-45)	5B20F77267	N
5	L G40-45 DIS E2-6110 1G (G40-45)	5B20F77257	N
5	L G40-45 W8S UMA E2-6110 (G40-45)	5B20F77249	N
5	L G40-45 W8S DIS E2-6110 2G (G40-45)	5B20F77282	N
5	L G40-45 W8S DIS E2-6110 1G (G40-45)	5B20F77263	N
5	L G40-45 W8P UMA E2-6110 (G40-45)	5B20F77254	N
5	L G40-45 W8P DIS E2-6110 2G (G40-45)	5B20F77259	N
5	L G40-45 W8P DIS E2-6110 1G (G40-45)	5B20F77250	N
5	L G40-45 UMA E1-6010 (G40-45)	5B20F77244	N
5	L G40-45 DIS E1-6010 2G (G40-45)	5B20F77281	N
5	L G40-45 DIS E1-6010 1G (G40-45)	5B20F77273	N
5	L G40-45 W8S UMA E1-6010 (G40-45)	5B20F77268	N
5	L G40-45 W8S DIS E1-6010 2G (G40-45)	5B20F77258	N
5	L G40-45 W8S DIS E1-6010 1G (G40-45)	5B20F77255	N
5	L G40-45 W8P UMA E1-6010 (G40-45)	5B20F77248	N
5	L G40-45 W8P DIS E1-6010 2G (G40-45)	5B20F77280	N
5	L G40-45 W8P DIS E1-6010 1G (G40-45)	5B20F77274	N
5	ACLU1 MB I7-4500U 2G 100M (G40-70)	90006433	N
5	ACLU1 MB W8P I7-4500U 2G 100M (G40-70)	90006434	N
5	ACLU1 MB W8S I7-4500U 2G 100M (G40-70)	90006435	N
5	ACLU1 MB DIS I7-4500U 2G 1000M (G40-70)	90005900	N
5	ACLU1 MB W8P I7-4500U 2G 1000M (G40-70)	90006416	N
5	ACLU1 MB W8S I7-4500U 2G 1000M (G40-70)	90006417	N
5	ACLU1 MB I5-4200U 2G 100M (G40-70)	90006436	N
5	ACLU1 MB W8P I5-4200U 2G 100M (G40-70)	90006437	N
5	ACLU1 MB W8S I5-4200U 2G 100M (G40-70)	90006438	N
5	ACLU1 MB DIS I5-4200U 2G 1000M (G40-70)	90005901	N
5	ACLU1 MB W8P I5-4200U 2G 1000M (G40-70)	90006418	N
5	ACLU1 MB W8S I5-4200U 2G 1000M (G40-70)	90006419	N
5	ACLU1 MB I3-4100U 2G 100M (G40-70)	90006451	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
5	ACLU1 MB W8P I3-4100U 2G 100M (G40-70)	90006452	N
5	ACLU1 MB W8S I3-4100U 2G 100M (G40-70)	90006453	N
5	ACLU1 MB I3-4100U 2G 1000M (G40-70)	90006448	N
5	ACLU1 MB W8P I3-4100U 2G 1000M (G40-70)	90006449	N
5	ACLU1 MB W8S I3-4100U 2G 1000M (G40-70)	90006450	N
5	ACLU1 MB I3-4010U 2G 100M (G40-70)	90006439	N
5	ACLU1 MB W8P I3-4010U 2G 100M (G40-70)	90006440	N
5	ACLU1 MB W8S I3-4010U 2G 100M (G40-70)	90006441	N
5	ACLU1 MB DIS I3-4010U 2G 1000M (G40-70)	90005902	N
5	ACLU1 MB W8P I3-4010U 2G 1000M (G40-70)	90006420	N
5	ACLU1 MB W8S I3-4010U 2G 1000M (G40-70)	90006421	N
5	ACLU1 MB I3-4005U 2G 100M (G40-70)	90006427	N
5	ACLU1 MB W8P I3-4005U 2G 100M (G40-70)	90006428	N
5	ACLU1 MB W8S I3-4005U 2G 100M (G40-70)	90006429	N
5	ACLU1 MB I3-4005U 2G 1000M (G40-70)	90006424	N
5	ACLU1 MB W8P I3-4005U 2G 1000M (G40-70)	90006425	N
5	ACLU1 MB W8S I3-4005U 2G 1000M (G40-70)	90006426	N
5	ACLU1 MB DIS 3558U 2G 100M (G40-70)	90005899	N
5	ACLU1 MB W8P 3558U 2G 100M (G40-70)	90006414	N
5	ACLU1 MB W8S 3558U 2G 100M (G40-70)	90006415	N
5	ACLU1 MB 3558U 2G 1000M (G40-70)	90006430	N
5	ACLU1 MB W8P 3558U 2G 1000M (G40-70)	90006431	N
5	ACLU1 MB W8S 3558U 2G 1000M (G40-70)	90006432	N
5	ACLU1 MB 2957U 2G 100M (G40-70)	90006445	N
5	ACLU1 MB W8P 2957U 2G 100M (G40-70)	90006446	N
5	ACLU1 MB W8S 2957U 2G 100M (G40-70)	90006447	N
5	ACLU1 MB 2957U 2G 1000M (G40-70)	90006442	N
5	ACLU1 MB W8P 2957U 2G 1000M (G40-70)	90006443	N
5	ACLU1 MB W8S 2957U 2G 1000M (G40-70)	90006444	N
5	ACLU1 MB UMA I7-4500U 100M (G40-70)	90006490	N
5	ACLU1 MB W8P UMA I7-4500U 100M (G40-70)	90006491	N
5	ACLU1 MB W8S UMA I7-4500U 100M (G40-70)	90006492	N
5	ACLU1 MB UMA I7-4500U 1000M (G40-70)	90006487	N
5	ACLU1 MB W8P UMA I7-4500U 1000M (G40-70)	90006488	N
5	ACLU1 MB W8S UMA I7-4500U 1000M (G40-70)	90006489	N
5	ACLU1 MB UMA I5-4200U 100M (G40-70)	90006484	N
5	ACLU1 MB W8P UMA I5-4200U 100M (G40-70)	90006485	N
5	ACLU1 MB W8S UMA I5-4200U 100M (G40-70)	90006486	N
5	ACLU1 MB UMA I5-4200U 1000M (G40-70)	90006481	N
5	ACLU1 MB W8P UMA I5-4200U 1000M (G40-70)	90006482	N
5	ACLU1 MB W8S UMA I5-4200U 1000M (G40-70)	90006483	N
5	ACLU1 MB UMA I3-4100U 100M (G40-70)	90006478	N
5	ACLU1 MB W8P UMA I3-4100U 100M (G40-70)	90006479	N
5	ACLU1 MB W8S UMA I3-4100U 100M (G40-70)	90006480	N
5	ACLU1 MB UMA I3-4100U 1000M (G40-70)	90006475	N
5	ACLU1 MB W8P UMA I3-4100U 1000M (G40-70)	90006476	N
5	ACLU1 MB W8S UMA I3-4100U 1000M (G40-70)	90006477	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
5	ACLU1 MB UMA I3-4010U 100M (G40-70)	90006472	N
5	ACLU1 MB W8P UMA I3-4010U 100M (G40-70)	90006473	N
5	ACLU1 MB W8S UMA I3-4010U 100M (G40-70)	90006474	N
5	ACLU1 MB UMA I3-4010U 1000M (G40-70)	90006469	N
5	ACLU1 MB W8P UMA I3-4010U 1000M (G40-70)	90006470	N
5	ACLU1 MB W8S UMA I3-4010U 1000M (G40-70)	90006471	N
5	ACLU1 MB UMA I3-4005U 100M (G40-70)	90006466	N
5	ACLU1 MB W8P UMA I3-4005U 100M (G40-70)	90006467	N
5	ACLU1 MB W8S UMA I3-4005U 100M (G40-70)	90006468	N
5	ACLU1 MB UMA I3-4005U 1000M (G40-70)	90006463	N
5	ACLU1 MB W8P UMA I3-4005U 1000M (G40-70)	90006464	N
5	ACLU1 MB W8S UMA I3-4005U 1000M (G40-70)	90006465	N
5	ACLU1 MB UMA 3558U 100M (G40-70)	90006460	N
5	ACLU1 MB W8P UMA 3558U 100M (G40-70)	90006461	N
5	ACLU1 MB W8S UMA 3558U 100M (G40-70)	90006462	N
5	ACLU1 MB UMA 3558U 1000M (G40-70)	90006457	N
5	ACLU1 MB W8P UMA 3558U 1000M (G40-70)	90006458	N
5	ACLU1 MB W8S UMA 3558U 1000M (G40-70)	90006459	N
5	ACLU1 MB UMA 2957U 100M (G40-70)	90005903	N
5	ACLU1 MB W8P UMA 2957U 100M (G40-70)	90006422	N
5	ACLU1 MB W8S UMA 2957U 100M (G40-70)	90006423	N
5	ACLU1 MB UMA 2957U 1000M (G40-70)	90006454	N
5	ACLU1 MB W8P UMA 2957U 1000M (G40-70)	90006455	N
5	ACLU1 MB W8S UMA 2957U 1000M (G40-70)	90006456	N
5	ACLUG MB I7-4500U 2G 1000M (Z40-70/G40-70m)	90006950	N
5	ACLUG MB W8P I7-4500U 2G 1000M (Z40-70/G40-70m)	90006951	N
5	ACLUG MB W8S I7-4500U 2G 1000M (Z40-70/G40-70m)	90006952	N
5	ACLUG MB I5-4200U 2G 1000M (Z40-70/G40-70m)	90006953	N
5	ACLUG MB W8P I5-4200U 2G 1000M (Z40-70/G40-70m)	90006954	N
5	ACLUG MB W8S I5-4200U 2G 1000M (Z40-70/G40-70m)	90006955	N
5	ACLUG MB I3-4100U 2G 1000M (Z40-70/G40-70m)	90006956	N
5	ACLUG MB W8P I3-4100U 2G 1000M (Z40-70/G40-70m)	90006957	N
5	ACLUG MB W8S I3-4100U 2G 1000M (Z40-70/G40-70m)	90006958	N
5	ACLUG MB I3-4010U 2G 1000M (Z40-70/G40-70m)	90006959	N
5	ACLUG MB W8P I3-4010U 2G 1000M (Z40-70/G40-70m)	90006960	N
5	ACLUG MB W8S I3-4010U 2G 1000M (Z40-70/G40-70m)	90006961	N
5	ACLUG MB I3-4005U 2G 1000M (Z40-70/G40-70m)	90006962	N
5	ACLUG MB W8P I3-4005U 2G 1000M (Z40-70/G40-70m)	90006963	N
5	ACLUG MB W8S I3-4005U 2G 1000M (Z40-70/G40-70m)	90006964	N
5	ACLUG MB 3558U 2G 1000M (Z40-70/G40-70m)	90006965	N
5	ACLUG MB W8P 3558U 2G 1000M (Z40-70/G40-70m)	90006966	N
5	ACLUG MB W8S 3558U 2G 1000M (Z40-70/G40-70m)	90006967	N
5	ACLUG MB 2957U 2G 1000M (Z40-70/G40-70m)	90006968	N
5	ACLUG MB W8P 2957U 2G 1000M (Z40-70/G40-70m)	90006969	N
5	ACLUG MB W8S 2957U 2G 1000M (Z40-70/G40-70m)	90006970	N
5	ACLUA MB DIS I7-4500 GT 2G (Z40-70)	90007154	N
5	ACLUA MB DIS I5-4200 GT 2G (Z40-70)	90007155	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
5	ACLUA MB DIS I3-4100 GT 2G (Z40-70)	90007156	N
5	ACLUA MB DIS I3-4010 GT 2G (Z40-70)	90007157	N
5	ACLUA MB DIS I3-4005 GT 2G (Z40-70)	90007158	N
5	ACLUA MB DIS 3558 GT 2G (Z40-70)	90007159	N
5	ACLUA MB DIS 2957 GT 2G (Z40-70)	90007160	N
5	ACLUA MB DIS I7-4500 GT 4G (Z40-70)	90007161	N
5	ACLUA MB DIS I5-4200 GT 4G (Z40-70)	90007162	N
5	ACLUA MB DIS I3-4100 GT 4G (Z40-70)	90007163	N
5	ACLUA MB DIS I3-4010 GT 4G (Z40-70)	90007164	N
5	ACLUA MB DIS I3-4005 GT 4G (Z40-70)	90007165	N
5	ACLUA MB DIS 3558 GT 4G (Z40-70)	90007166	N
5	ACLUA MB DIS 2957 GT 4G (Z40-70)	90007167	N
5	ACLUA MB W8S DIS I7-4500 GT 2G (Z40-70)	90007168	N
5	ACLUA MB W8S DIS I5-4200 GT 2G (Z40-70)	90007169	N
5	ACLUA MB W8S DIS I3-4100 GT 2G (Z40-70)	90007170	N
5	ACLUA MB W8S DIS I3-4010 GT 2G (Z40-70)	90007171	N
5	ACLUA MB W8S DIS I3-4005 GT 2G (Z40-70)	90007172	N
5	ACLUA MB W8S DIS 3558 GT 2G (Z40-70)	90007173	N
5	ACLUA MB W8S DIS 2957 GT 2G (Z40-70)	90007174	N
5	ACLUA MB W8S DIS I7-4500 GT 4G (Z40-70)	90007175	N
5	ACLUA MB W8S DIS I5-4200 GT 4G (Z40-70)	90007176	N
5	ACLUA MB W8S DIS I3-4100 GT 4G (Z40-70)	90007177	N
5	ACLUA MB W8S DIS I3-4010 GT 4G (Z40-70)	90007178	N
5	ACLUA MB W8S DIS I3-4005 GT 4G (Z40-70)	90007179	N
5	ACLUA MB W8S DIS 3558 GT 4G (Z40-70)	90007180	N
5	ACLUA MB W8S DIS 2957 GT 4G (Z40-70)	90007181	N
5	ACLUA MB W8P DIS I7-4500 GT 2G (Z40-70)	90007182	N
5	ACLUA MB W8P DIS I5-4200 GT 2G (Z40-70)	90007183	N
5	ACLUA MB W8P DIS I3-4100 GT 2G (Z40-70)	90007184	N
5	ACLUA MB W8P DIS I3-4010 GT 2G (Z40-70)	90007185	N
5	ACLUA MB W8P DIS I3-4005 GT 2G (Z40-70)	90007186	N
5	ACLUA MB W8P DIS 3558 GT 2G (Z40-70)	90007187	N
5	ACLUA MB W8P DIS 2957 GT 2G (Z40-70)	90007188	N
5	ACLUA MB W8P DIS I7-4500 GT 4G (Z40-70)	90007189	N
5	ACLUA MB W8P DIS I5-4200 GT 4G (Z40-70)	90007190	N
5	ACLUA MB W8P DIS I3-4100 GT 4G (Z40-70)	90007191	N
5	ACLUA MB W8P DIS I3-4010 GT 4G (Z40-70)	90007192	N
5	ACLUA MB W8P DIS I3-4005 GT 4G (Z40-70)	90007193	N
5	ACLUA MB W8P DIS 3558 GT 4G (Z40-70)	90007194	N
5	ACLUA MB W8P DIS 2957 GT 4G (Z40-70)	90007195	N
5	L Z40-75 FX-7500 UMA (Z40-75)	5B20F66790	N
5	L Z40-75 W8S FX-7500 UMA (Z40-75)	5B20F66780	N
5	L Z40-75 W8P FX-7500 UMA (Z40-75)	5B20F66773	N
5	L Z40-75 A10-7300 UMA (Z40-75)	5B20F66801	N
5	L Z40-75 W8S A10-7300 UMA (Z40-75)	5B20F66794	N
5	L Z40-75 W8P A10-7300 UMA (Z40-75)	5B20F66784	N
5	L Z40-75 A8-7100 UMA (Z40-75)	5B20F66777	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
5	L Z40-75 W8S A8-7100 UMA (Z40-75)	5B20F66805	N
5	L Z40-75 W8P A8-7100 UMA (Z40-75)	5B20F66797	N
5	L Z40-75 FX-7500 DIS 2G (Z40-75)	5B20F66788	N
5	L Z40-75 W8S FX-7500 DIS 2G (Z40-75)	5B20F66783	N
5	L Z40-75 W8P FX-7500 DIS 2G (Z40-75)	5B20F66776	N
5	L Z40-75 A10-7300 DIS 2G (Z40-75)	5B20F66803	N
5	L Z40-75 W8S A10-7300 DIS 2G (Z40-75)	5B20F66804	N
5	L Z40-75 W8P A10-7300 DIS 2G (Z40-75)	5B20F66796	N
5	L Z40-75 A8-7100 DIS 2G (Z40-75)	5B20F66786	N
5	L Z40-75 W8S A8-7100 DIS 2G (Z40-75)	5B20F66779	N
5	L Z40-75 W8P A8-7100 DIS 2G (Z40-75)	5B20F66808	N
6	ACLU9 Thermal DIS (G40-30)	90205538	N
6	ACLU9 Thermal UMA (G40-30)	90205539	N
6	L G40-45 DIS (G40-45/Z40-75)	5H40F77279	N
6	ACLU1 HeatSink DIS (G40-70)	90205114	N
6	ACLU1 HeatSink UMA (G40-45/G40-70/Z40-75)	90205115	N
6	ACLUG Heatsink DIS (Z40-70/G40-70m)	90205317	N
7	ACLU1 Fan	90205116	N
8	USB&Audio Board L G40-45 W/Cable (G40-45)	5C50F77260	N
8	ACLU1 USB&Audio Board W/Cable (G40-30/G40-70/ Z40-70/G40-70m/Z40-75)	90005905	N
9	ACLU1 Speaker L+R (G40-70)	90205227	N
10	HDD, ST320LT012 6G 7mm 5.4K 320G HDD	16200384	**
10	HDD, WD3200LPCX-24C6HT0 6G 7mm 5.4K 320G HDD	16200551	**
10	HDD, HTS545032A7E660 6G 7mm 5.4K 320G HDD	16200405	**
10	HDD, TSB MQ01ABF032 6G 7mm 5.4K 320G HDD	16200434	**
10	HDD, ST500LT012 6G 7mm 5.4K 500G HDD	16200383	**
10	HDD, WD5000LPCX-24C6HT0 6G 7mm 5.4K 500G HDD	16200395	**
10	HDD, HTS545050A7E660 6G 7mm 5.4K 500G HDD	16200404	**
10	HDD, TSB MQ01ABF050 6G 7mm 5.4K 500G HDD	16200433	**
10	HDD, ST1000LM024 6G 9.5mm 5.4K 1T HDD	16200385	**
10	HDD, WD10JPCX-24UE4T0 6G 9.5mm 5.4K 1T HDD	16200393	**
10	HDD, TSB MQ01ABD100 6G 9.5mm 5.4K 1T HDD	16200429	**
10	HDD, HTS541010A9E680 6G 9.5mm 5.4K 1T HDD	16200400	**
10	HDD, ST500LM000 6G 7mm 500G+8G SSHD	16200391	**
10	HDD, ST1000LM014 9.5mm 1T+8G 5400rpm SSHD	16200389	**
11	RAM, SS M471B5173QH0-YK0 4GB DDR3L 1600 (new)	11202079	**
11	RAM, Hyn HMT451S6AFR8A-PB DDR3L 1600 4GB	11201300	**
11	RAM, RMT3170ME68F9F-1600 4GB DDR3L 1600(MC)	11202302	**
11	RAM, MC MT8KTF51264HZ-1G6E1 4GB DDR3L 1600	11202125	**
11	RAM, M471B5173DB0-YK0 25nm 4GB DDR3L 1600	11202081	**
11	RAM, SK HMT451S6BFR8A-PB/RD 4GB DDR3L 1600	11202706	**
11	RAM, M471B1G73QH0-YK0 35nmQ 8GB DDR3L 1600	11202080	**
11	RAM, Hyn HMT41GS6AFR8A-PB DDR3L 1600 8GB	11201301	**
11	RAM, RMT3160ME68FAF-1600 8GB DDR3L 1600	11202450	**
11	RAM, Mic MT16KTF1G64HZ-1G6E1 DDR3L 1600 8GB	11201304	**
11	RAM, M471B1G73DB0-YK0 25nm 8GB DDR3L 1600	11202082	**

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID.
11	RAM, SK HMT41GS6BFR8A-PB/RD 8GB DDR3L 1600	11202707	**
12	WirelessLan_Non_Intel, Ltn NFA335 1x1BN+BT4.0 PCIE M.2 WLAN	20200558	**
12	WirelessLan_Non_Intel, Cbt BCM43142 1x1BN+BT4.0 PCIE M.2 WLAN	20200557	**
12	WirelessLan_Non_Intel, Cbt RTL8723BE 1x1BN+BT4.0 PCIE M.2 WLAN	20200570	**
12	WirelessLan_Non_Intel, Ltn NFA345 1x1AC+BT4.0 PCIE M.2 WLAN	20200579	**
12	WirelessLan_Non_Intel, Cbt BCM43162 1x1AC+BT4.0 PCIE M.2 WLAN	20200573	**
12	WirelessLan_Intel, Intel 3160 1x1AC+BT PCIE NGFF WLAN (G40-30/G40-70/G40-70m/Z40-70)	20200418	**
13	ACLU1 Dummy ODD (G40-30/G40-70)	90205226	**
13	ODD, HLDS GUA0N 9.0 Rambo ODD	25215010	**
13	ODD, PLDS DA-8A5SH Slim SATA Tray Rambo	25213110	**
13	ODD, QSI UJ8FBS 9.0 Rambo ODD	25215312	**
13	ODD, TSST SU-228FB 9.0 Rambo ODD	25215832	**
14	ACLU1 Lower Case Black	90205107	N
14	ACLUG Lower Case White H W/Speaker L+R (Z40-70/G40-70m)	90205313	N
15	ACLU1 Thermal Door Black	90205108	**
15	ACLUG Thermal Door White H (Z40-70/G40-70m)	90205314	**
16	Battery, G5XXS SY L12S4E01 14.4V41Wh 4cell bty	121500171	*
16	Battery, G5XXS SP/L L12M4E01 14.88V41Wh 4cell bty	121500172	*
16	Battery, G5XXS LG L12L4E01 14.8V41Wh 4cell bty	121500173	*
16	Battery, G5XXS SY L12S4A02 14.4V32Wh 4cell bty	121500174	*
16	Battery, G5XXS SP/L L12M4A02 14.4V32Wh 4cell bty	121500175	*
16	Battery, G5XXS LG L12L4A02 14.4V32Wh 4cell bty	121500176	*
—	AC adapter (see “AC adapters” on page 82).		

LCD FRUs

In Lenovo G40-30/G40-45/G40-70/G40-70m/Z40-70/Z40-75, there are following types of LCDs.

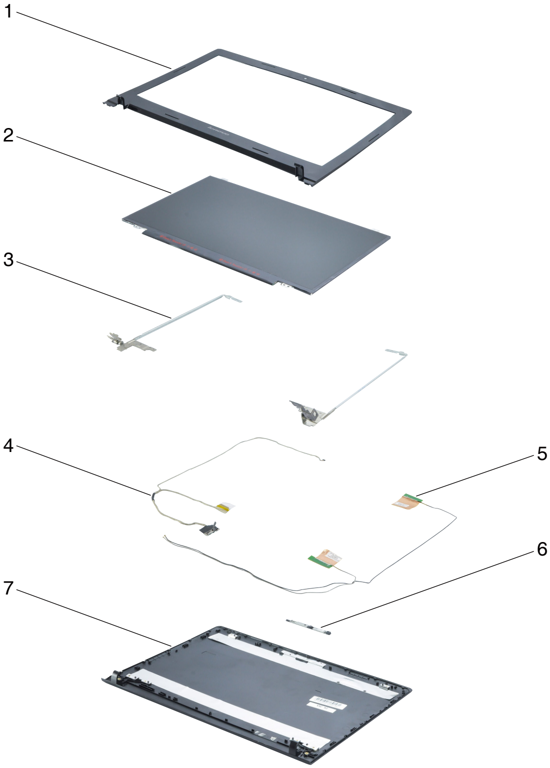


Table 5. Parts list—14.0-in. HD LED

No.	FRU	FRU no.	CRU ID.
1	ACLU1 LCD Bezel Black (G40-30/G40-45/G40-70)	90205105	N
1	ACLUG LCD Bezel Black M (Z40-70/G40-70m/Z40-75)	90205309	N
1	ACLUG LCD Bezel Silver H (Z40-70/G40-70m)	90205310	N
2	LGD LP140WH2-TPSH HD G F LED1 NB LCD	18201662	N
2	AUO B140XTN03.2 4A HD G F LED1 NB LCD	18201663	N
2	CMI N140BGE-EB3 C2 HD G S LED1 NB LCD	18201664	N
3	ACLU1 Hinge W/LCD Bracket L+R	90205229	N
4	ACLU1 LCD Cable DIS (G40-70)	90205230	N
4	ACLU1 LCD Cable UMA (G40-70)	90205231	N
5	ACLU1 Antenna WLAN Main+AUX (G40-70)	90205228	N
6	ACLU1 Camera Board 1M (G40-30/G40-45/G40-70)	90005906	N
6	ACLU1 Camera Board 0.3M (G40-30/G40-45/G40-70)	90005907	N
6	ACLUG Camera Board 720P (Z40-70/G40-70m/Z40-75)	90006949	N
7	ACLU9 LCD Cover DIS RED (G40-30/G40-45)	90205540	N
7	ACLU9 LCD Cover DIS SV (G40-30/G40-45)	90205542	N
7	ACLU1 LCD Cover Black DIS	90205103	N
7	ACLU1 LCD Cover Black UMA (Z40-70/G40-70)	90205104	N
7	ACLUG LCDCoverWhiteW/Antenna/LCDCableDIS (Z40-70/G40-70m)	90205308	N
7	ACLUA LCD Cover BK DIS (G40-30/G40-45/Z40-70)	90205389	N
7	ACLUA LCD Cover SV DIS (Z40-70)	90205391	N

Keyboard

Table 6. Parts list—Keyboard

Language		P/N	CRU ID.
Chicony	English	25214510	N
	U.K. English	25214511	
	Italian	25214512	
	Spanish	25214513	
	Turkish	25214514	
	Thai	25214515	
	Portuguese	25214516	
	Latin	25214517	
	Canadian English&French	25214518	
	Korean	25214519	
	Traditional Chinese	25214520	
	Russian	25214521	
	French	25214522	
	German	25214523	
	Arabic	25214524	
	Brazilian	25214525	
	Japanese	25214526	
	Dutch	25214527	
	Greek	25214528	
	Hebrew	25214529	
	Hungarian	25214530	
	Four Nordic countries	25214531	
	Belgian	25214532	
	Icelandic	25214533	
	Slovenian	25214534	
	Swiss	25214535	
	International English	25214536	
	Czechoslovakian	25214537	
	Bulgarian	25214538	
	Indian	25214539	
Sunrex	English	25214540	
	U.K. English	25214541	
	Italian	25214542	
	Spanish	25214543	
	Turkish	25214544	
	Thai	25214545	
	Portuguese	25214546	
	Latin	25214547	
	Canadian English&French	25214548	
	Korean	25214549	
	Traditional Chinese	25214550	
	Russian	25214551	
	French	25214552	
	German	25214553	

Table 6. Parts list—Keyboard (continued)

Language		P/N	CRU ID.
Sunrex	Arabic	25214554	N
	Brazilian	25214555	
	Dutch	25214557	
	Greek	25214558	
	Hebrew	25214559	
	Hungarian	25214560	
	Four Nordic countries	25214561	
	Belgian	25214562	
	Icelandic	25214563	
	Slovenian	25214564	
	Swiss	25214565	
	International English	25214566	
	Czechoslovakian	25214567	
	Bulgarian	25214568	
	Indian	25214569	
Liteon	English	25215190	
	U.K. English	25215191	
	Italian	25215192	
	Spanish	25215193	
	Turkish	25215194	
	Thai	25215195	
	Portuguese	25215196	
	Latin	25215197	
	Canadian English&French	25215198	
	Korean	25215199	
	Traditional Chinese	25215200	
	Russian	25215201	
	French	25215202	
	German	25215203	
	Arabic	25215204	
	Brazilian	25215205	
	Japanese	25215206	
	Dutch	25215207	
	Greek	25215208	
	Hebrew	25215209	
	Hungarian	25215210	
	Four Nordic countries	25215211	
	Belgian	25215212	
	Icelandic	25215213	
	Slovenian	25215214	
	Swiss	25215215	
	International English	25215216	
	Czechoslovakian	25215217	
	Bulgarian	25215218	
	Indian	25215219	

Miscellaneous parts

Table 7. Parts list—Miscellaneous parts

FRU	P/N	CRU ID.
System miscellaneous parts:		N
• (*a*) HDD Bracket,L,G40-70,L+R (G40-30/G40-45/Z40-75)	5B40F65212	
• (*a*) ACLU1 HDD Bracket L+R (G40-70/G40-70m/Z40-70)	90205110	
• (*b*) ACLU1 ODD Bracket	90205111	
• (*c*) ACLU1 ODD Bezel Tray-in (G40-30/G40-45/G40-70)	90205109	
• (*c*) ACLUG ODD Bezel Black M (Z40-70/G40-70m/Z40-75)	90205315	
• (*c*) ACLUG ODD Bezel White H (Z40-70/G40-70m)	90205316	
• (*c*) ACLUA ODD Bezel BK painting (Z40-70)	90205394	
Cable miscellaneous parts:		
• (*d*) ACLU1 DC-IN Cable DIS	90205112	
• (*d*) ACLU1 DC-IN Cable UMA (G40-70)	90205113	
• (*e*) ACLU1 Touch Pad Cable (G40-70)	90205232	
Note: Italicized letters in parentheses are references to the exploded view in “Overall” on page 69.		

AC adapters

Table 8. Parts list—3-pin AC adapters

FRU	P/N	CRU ID.
Delta ADLX45NDC3A 20V2.25A adapter	36200245	*
Liteon ADLX45NLC3A 20V2.25A adapter	36200246	*
Chicony ADLX45NCC3A 20V2.25A adapter	36200247	*
Delta ADLX45NDC3A 20V2.25A adap(CMN)	36200602	*
Liteon ADLX45NLC3A 20V2.25A adap(CMN)	36200606	*
Chicony ADLX45NCC3A 20V2.25A adap(CMN)	36200610	*
Delta ADLX65NDC3A 20V3.25A adapter	36200249	*
Liteon ADLX65NLC3A 20V3.25A adapter	36200251	*
Chicony ADLX65NCC3A 20V3.25A adapter	36200253	*
Liteon ADLX65NLC3A 20V3.25A adap(CMN)	36200607	*
Chicony ADLX65NCC3A 20V3.25A adap(CMN)	36200611	*

Screw

Table 9. Parts list—screw

FRU	P/N	CRU ID.
ACLU1 Screw Panel-A/MB-D/IO BD-D/Thm-MB	90205117	N

Power cords

A Lenovo power cord for a specific country or region is usually available only in that country or region:

Table 10. Parts list—power cords

Region	P/N	CRU ID.
CCC 3PIN • LINETEK PC323+RVV300/300+LS15 1m	145000600	*
Argentina 3PIN • LINETEK LS15+H03VV-F+LP39 1m	145000599	
Danmark 3PIN • LINETEK LS15+H03VV-F+LP-38 1m	145000598	
Switzerland 3PIN • LINETEK LS15+H03VV-F+LP-37 1m	145000597	
Brazil 3PIN • LINETEK LS15 H03VV-F LP26A 1m	145000596	
Israel 3PIN • LINETEK LS15+H03VV-F+LP-41 1m	145000595	
UL 3PIN • LINETEK LP-30B + SPT-2 + LS15 1m	145000594	
UK 3PIN • LINETEK LP-61L+ H03VV-F+ LS15 1m	145000593	
Indian 3PIN • LINETEK PE-361+ H05VV-F+ LS15 1m	145000592	
Italy 3PIN • LINETEK LS15+H03VV-F+PE-336 1m	145000591	
Korea 3PIN • LINETEK LS15+H05VV-F+LP-E04A 1m	145000590	
Australia 3PIN • LINETEK LS15+H03VV-F+LP-23A 1m	145000589	
Taiwan 3PIN • LINETEK LS15+VCTF+LP-53 1m	145000588	
Japan 3PIN • LINETEK LS15+VCTF+LP-54 1m	145000587	
Africa 3PIN • LINETEK LS15+H03VV-F+PE-364 1m	145000586	
CE 3PIN • LINETEK LP-34+H03VV-F + LS15 1m	145000585	
CCC 3PIN • Longwell LSG-31+RVV300/300+LS-18 1m	145000568	
Argentina 3PIN • Longwell LP-24+H03VV-F+LS-18 1m	145000567	
Danmark 3PIN • Longwell LP-40+H03VV-F+LS-18 1m	145000566	

Table 10. Parts list—power cords (continued)

Region	P/N	CRU ID.
Switzerland 3PIN • Longwell LP-37+H03VV-F+LS-18 1m	145000565	*
Brazil 3PIN • Longwell LP-46+H03VV-F+LS-18 1m	145000564	
Israel 3PIN • Longwell LP-41+H03VV-F+LS-18 1m	145000563	
UL 3PIN • Longwell LP-30B+SPT-2 18AWG+LS-18 1m	145000562	
UK 3PIN • Longwell LP-61L+H03VV-F+LS-18 1m	145000561	
Indian 3PIN • Longwell LP-67+BIS+LS-18 1m	145000560	
Italy 3PIN • Longwell LP-22+H03VV-F+LS-18 1m	145000559	
Korea 3PIN • Longwell LP-486+KTLH03VV-F+LS-5 1m	145000558	
Australia 3PIN • Longwell LP-23A+LFC-3R+LS-18 1m	145000557	
Taiwan3PIN • Longwell LP-71+VCTF+LS-33 1m	145000556	
Japan 3PIN • Longwell LP-54+VCTF+LS-18 1m	145000555	
Africa 3PIN • Longwell LP-39+H03VV-F+LS-18 1m	145000554	
CE 3PIN • Longwell LP-34A+H03VV-F+LS-18 1m	145000553	
CCC 3PIN • VOLEX GB10S3+RVV 300/500+VAC5S 1m	145000538	
UL 3PIN • Volex US15S3+SPT-2 +VAC5S 1m	145000537	
UK 3PIN • VOLEX MP5004+H03VV-F+VAC5S 1m	145000605	
Switzerland 3PIN • VOLEX MP232+H03VV-F+VAC5S 1m	145000524	
Italy 3PIN • VOLEX IT10S3+HO3VV-F+VAC5S 1m	145000535	
Denmark 3PIN • VOLEX MP233D+H03VV-F+VAC5S 1m	145000534	
Korea 3PIN • VOLEX M2511+KETI IEC+VAC5S 1m	145000533	
Australia 3PIN • VOLEX AU10S3+H03VV-F+VAC5S 1m	145000532	
Taiwan 3PIN • VOLEX TW15CS3+VCTF+VAC5S 1m	145000531	

Table 10. Parts list—power cords (continued)

Region	P/N	CRU ID.
Japan 3PIN • VOLEX VAC5S+VCTF+M755 1m	145000530	*
Argentina 3PIN • VOLEX VA2073+H03VV-F+VAC5S 1m	145000528	
Brazil 3PIN • VOLEX CH10S3+H03VV-F+VAC5S 1m	145000527	
Israel 3PIN • VOLEX SI16S3+H03VV-F+VAC5S 1m	145000526	
CE 3PIN • VOLEX M2511+HO3VV-F+VAC5S 1m	145000525	
UK • lux 0031+H03VV-F 0.75/3C+0011 1m	145500000	
Europe • lux 0033+H03VV-F 0.75/3C+0011 1m	145500001	
US • lux 0014+SPT-2 60°C 18/3C+0016 1m	145500002	
China • lux 0036+RVV 300/300 0.75/3C+0002 1m	145500003	
Indian • lux 0046+IS694 0.75/3C+0011 1m	145500004	
Japan • lux 0018(E)+VCTF 0.75/3C+0021 1m	145500005	
Australia • lux 0038+H03VV-F 0.75/3C+0011 1m	145500006	
Taiwan • lux 0019+VCTF 0.75/3C+0021 1m	145500007	
Korea • lux 0033+H03VV-F 0.75/3C+0011 1m	145500008	
Italy • lux 0029+H03VV-F 0.75/3C+0011 1m	145500009	
South Africa • lux 0044+H03VV-F 0.75/3C+0011 1m	145500010	
Brazil • lux 0034+H03VV-F 0.75/3C+0011 1m	145500011	
Israel • lux 0041+H03VV-F 0.75/3C+0011 1m	145500012	
Switzerland • lux 0027+H03VV-F 0.75/3C+0011 1m	145500013	
Denmark • lux 0048+H03VV-F 0.75/3C+0011 1m	145500014	
Argentina • lux 0040+H03VV-F 0.75/3C+0011 1m	145500015	

Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service.

Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents.

LENOVO GROUP LTD. PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary.

Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Trademarks

The following terms are trademarks or registered trademarks of Lenovo in the United States, other countries, or both.

Lenovo
OneKey

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, products, or service names may be trademarks or service marks of others.